DOCUMENT RESUME

ED 175 863 SP 014 784

TITLE	Teacher Policies in a New Context.
INSTITUTION	Organisation for Economic Cooperation and Development, Paris (France).
PUB DATE	79
NOTE	159p.: Not available in hard copy due to marginal legibility of original document
AVAILABLE FROM	OECD Publications, 2 Rue Andre-Pascal, 75775 Paris Cedex 16 France ($8.50)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Demography: *Educational Policy: Foreign Countries: *Social Factors: *Teacher Education: Teacher Recruitment: Teacher Supply and Demand: *Trend Analysis

ABSTRACT

The focus of these studies is on the quantitative and qualitative aspects of the recruitment, training, and utilization of teachers in relation to current economic, social, and demographic trends. Three major studies are reported: present situation and future prospects of teacher supply and demand in countries associated with the Organization for Economic Cooperation and Development: teacher policies at the level of compulsory education: and analysis of teacher tasks in selected innovative schools. A statement of overall policy issues and orientations in teacher policies precedes the study reports. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED175863

SP

DOCUMENT

TEACHER POLICIES IN A NEW CONTEXT

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
Organisation for Economic Cooperation and Development

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
PARIS 1979

JUL 24 10 31 AM '79

Publié en français sous le titre :

LA PROFESSION ENSEIGNANTE
nouvelles orientations

The Organisation for Economic Co-operation and Development (OECD) was set up under a Convention signed in Paris on 14th December 1960, which provides that the OECD shall promote policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development;
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The Members of OECD are Australia, Austria, Belgium, Canada, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

⁂

© OECD, 1979
Queries concerning permissions or translation rights should be addressed to:
Director of Information, OECD
2, rue André-Pascal, 75775 PARIS CEDEX 16, France.

CONTENT

Page

Preface 5

Part One

A STATEMENT OF OVERALL POLICY ISSUES AND ORIENTATIONS 7
I Introduction 9
II The context 11
III Recruitment 12
IV Training 15
V Measures to improve working conditions 18
References 22

Part Two

PRESENT SITUATION AND FUTURE PROSPECTS OF TEACHER SUPPLY AND DEMAND IN MEMBER COUNTRIES 25
I Introduction 27
II Quantitative trend of teacher supply and demand 28
III Factors affecting teacher demand 41
IV Factors affecting teacher supply 47
V Possible imbalances between teacher supply and demand and their repercussions on employment 52
VI Measures to regulate teacher supply and demand 55
VII Conclusion 62
VIII Policy implications 64
Annexe 71

Page

Part Three

TEACHER POLICIES AT THE LEVEL OF COMPULSORY EDUCATION - A CLARIFYING REPORT 75

I Introduction 77

II The objectives of compulsory education .. 78

III The characteristics of present day society 80

IV New policies for teacher roles 84

V New policies for teacher training 91

VI New policies for teacher utilisation 96

VII Financial implications 100

VIII Transitory measures 101

IX Conclusion 103

References 104

Part Four

ANALYSIS OF TEACHER TASKS IN SELECTED INNOVATIVE SCHOOLS - GENERAL REPORT 105

Summary of main issues 107

I Introduction 109

II Characteristics of the schools and the pupils 111

III Characteristics of the innovation 113

IV Teaching approaches 119

V Changes in teacher tasks 125

VI Other tasks 130

VII Teacher abilities 134

VIII Implications for teacher training 136

IX Final remarks 137

Annex I : Utilisation of personnel other than teachers, especially assistants, in schools 140

Annex II : Guide-lines for case-studies . 150

FOREWORD

On the basis of the conclusion of the Intergovernmental Conference on Teacher Policies (Paris, 26th-29th November 1974), further analytical work was undertaken within OECD on a limited number of key policy issues affecting the teaching profession. This activity, which was carried out in the framework of the Programme of the Education Committee, was supervised by the Committee's Working Party on Teacher Policies. The Working Party also benefited from the work of the OECD Centre for Educational Research and Innovation on In-Service Teacher Training.

The focus of these studies was on the quantitative and qualitative aspects of the recruitment, training and utilisation of the teaching froce, against current economic, social and demographic trends. The qualitative analyses focused mainly on the compulsory school period, having regard to the crucial role which basic education played in the school career of pupils.

The present volume contains three main studies carried out under this programme, namely :

- Present situation and future prospects of teacher supply and demand in Member countries.
- Teacher policies at the level of compulsory education.
- Analysis of teacher tasks in selected innovative schools.

They are preceded by a statement of overall policy issues and orientations in teacher policies which were arrived at by the Working Party on the basis of the totality of its work. It is hoped that the publication of these studies in one volume will contribute to future policy developments in Member countries.

PART ONE

A STATEMENT OF
OVERALL POLICY ISSUES AND ORIENTATIONS

Report by the Secretariat

I - INTRODUCTION

The work on Teacher Policies which has been undertaken under the Education Committee's programme over the last few years had as its main objective to elucidate the consequences of changes in the educational system for teacher roles and tasks and to identify the training and support structures most likely to facilitate these changes.

The work has been closely coordinated with the variety of activities under the Committee and CERI dealing with educational change; this was essential in view of the central role which teachers play in any educational reform strategy. On the whole, however, the approach taken was based on the assumption that the teacher sub-system was amenable to specific policy analysis and consideration in view of the complexity and magnitude of the problems involved: school personnel account for by far the highest proportion of the annual operational costs of the educational system (70 per cent to 90 per cent, depending on the level of education); increasing importance is attached to the quality and effectiveness of teacher/pupil interaction; and there are complex policy/planning problems in the qualitative and quantitative adjustment of supply and demand which are peculiar to this sector.

It has not been possible to deal in detail with all the problems of all the categories of personnel involved in the teaching/learning process. The areas for study were selected on the basis of the priority needs observed in the majority of Member countries. Prevailing conditions in the educational systems influenced the choice more than any innovative models, which may be desirable, but are unfortunately not widespread enough to justify separate study in depth. There were, however, a number of studies of specific innovations designed to identify new trends and new policy problems and approaches resulting from these changes, particularly as they affect the roles and working conditions of teachers.

Although other categories of staff and individuals involved in school-life - particularly various categories of teacher aides (1) were not overlooked, the principal emphasis was on the problem of the teaching force as such since the teacher are and will continue to be central to the functioning of the education system. Broadly speaking, two major groups of teachers were selected - those in primary schools and the various categories of teachers in secondary schools. In the second stage more attention was also given to the more general problem of teachers in compulsory education.

---

(1) The term "aide" covers a very wide range of functions even within each individual country. The ambiguity of this concept is reflected in the vocabulary itself: in addition to the term "aide" adopted here, the terms "assistant", "auxiliary", "paraprofessional", etc., are also used. Definitions differ according to the Member country concerned, as indicated in Annex I "Utilisation of personnel other than teachers, especially assistants in schools" in Analysis of Teacher Tasks in Innovative Schools - General Report (Part Four of this volume).

Unlike other aspects of the education system, teacher policies have rarely figured in international comparative studies. This may well be because management of the teaching body is firmly entrenched in the cultural and administrative traditions of the individual Member countries. Any analysis of the problems must also take account of the fact that the teaching profession is a well-organised one with a strong tradition of trade unionism and that, in most Member countries, the professional organisations of teachers are increasingly involved in discussions and decisions related to the education system.

In addition, under the political and administrative practices which prevail in many countries, qualitative and quantitative approaches to the problems are by and large handled separately at national level (or at State and Provincial level, depending on the country) which makes coherent analysis and the search for possible remedies even more difficult. Lastly, statistical or other data in this area are not always reliable or sufficiently sophisticated, owing to the lack of basic information and of research and development studies focused on teacher policies. One of the aims of the activity was therefore to prepare, analyse and disseminate a series of country case studies and reports summarising the findings of relevant research and experiments, the hope being that Member countries could mutually benefit from the exchange of information on emerging problems and new practices. It should be noted, for example, that the first phase of the work was concluded in November 1974 with an Intergovernmental Conference, marked among other things, by a constructive dialogue between national delegates and representatives of the teaching body at the international level.(1) In a number of Member countries the conclusions of this Conference gave rise to closer analysis and dialogue between the different sectors concerned. In the United States, for example, the national Delegation to the Conference transformed itself subsequently into the "US-OECD Forum of Education Organisation Leaders" to pursue the examination of a number of key issues. The detailed bibliography **(see page 22) of the studies and documents published** during the first and second phases of the Working Party's mandate indicates the volume and diversity of the work accomplished.

---

(1) The Conference proceedings were widely disseminated in the OECD publication: _Teacher Policies - General Report on the Conference_, Paris, 1975.

To summarise the conclusions of all these studies might have been tantamount to repeating documents already published. It was therefore decided that the present document should seek primarily to set out and interpret a number of major conclusions as they relate to the implications of present and future developments for the teaching body with emphasis on the need for overall coherence in policies to be adopted.

II - THE CONTEXT

Teacher policies cannot ignore a number of new trends or developments that will affect the evolution of education systems in the years ahead. Indeed, their first effects have already been felt, mainly in the form of imbalances between teacher supply and demand, while in some Member countries "pockets of teacher unemployment" have emerged. The origin of these events, which may still affect teacher policies in the medium and long-term, must be traced to falling birthrate and a slowing down in the increase in public expenditure as a result of the economic crisis. The latter has also had the effect of slowing down the implementation of such initially costly reforms as the systematic organisation of in-service teacher training and the improvement of working conditions in schools. In any event, it is clear that demographic phenomena will be at the root of many problems affecting the future development of the teaching profession.(1)

As indicated in the report by the OECD Group of Experts: Education policies and trends in the context of social and economic development perspectives , (OECD, Paris, 1977) whatever the characteristics of future growth in Member countries, the problem of relationships between education and working life will remain central to the debate about the place of education systems in society. Moreover, if economic recovery is slow, increasing competition must be expected among the various social sectors for an optimal share of public resources. In such circumstances, it may well be that public opinion and attitudes to education will play an increasingly important part in as far as the education system may be pressed, more manifestly than in the past, to justify its results, and also demonstrate its efficiency in the use of the various resources that are placed at its disposal.(2) In this "accountability" debate about education teachers will occupy a central position, for what finally is at stake is who controls what goes on in the schools.

---

(1) A detailed analysis of how the various factors - particularly demographic factors - affect teacher recruitment appears in: "Present situation and future prospects of teacher supply and demand in Member countries", (Part Two of this volume).

(2) This theme is developed extensively in: "Teacher policies at the level of compulsory education - A clarifying report", (Part Three of this volume).

In many cases, greater efficiency simply means greater policy consistency. It is by no means evident that existing teacher policies set their short and medium-term measures logically within the context of necessarily more qualitative long-term perspectives. Nor is it certain that existing mechanisms of personnel planning, programming and management are able to integrate sufficiently the qualitative and quantitative aspects of development affecting the various categories of teachers and educators, in particular owing to a lack of adequate basic data and understanding on this subject. Fragmentary decision-making or forecasting procedures necessarily lead to inadequate, incoherent or belated measures which makes it even more difficult to resolve problems later on. Progress on this front will appear even more essential in that the actual situation and the very structure of social and economic development - will tend to be modified in the period ahead. In this context, some indicative examples of more coherent action on teacher policies are given below, in the three major areas of Recruitment; Training; and Measures to improve Working Conditions.

III - RECRUITMENT

In a large number of Member countries, medium and even long-term teacher recruitment will be influenced by a rapid slowing down of demand as a result of demographic trends. In such circumstances, aggravated by slower economic growth, the employment of newly qualified teachers will create serious problems, both for the administration and for the profession itself. One consequence of the employment situation might well be that, under various pressures, particularly from the professional organisations themselves, governments may be led to abandon, in the short and medium-term, current experimentation with the system of recruiting, outside the normal teaching profession, qualified people with professional qualifications and experience for various tasks in schools (on a full or part-time basis), so as to preserve all available posts for the potential supply of teachers who have completed traditional forms of initial training.

Whatever the immediate advantage of such a policy for the teaching profession, it would have the drawback of postponing until a much later date - and perhaps permanently impede - the introduction of a more open recruitment policy consonant with a number of concomitant trends, such as:

(i) opening up the schools themselves to the problems and experiences of the surrounding community;

(ii) a more cogent awareness of the education/employment relationship, reflected in the use and collaboration of "resource-persons" (other than teachers) to complement teacher activities under the initiative and supervision of the teachers and school authorities;

(iii) attempts to enrich and diversify school life and thereby enhance its efficiency through a better allocation of tasks. This can be done, for example, by calling on outside specialists with a knowledge of school problems, on parents on a voluntary basis or various categories of teacher aides on a paid basis, whose activities would also supplement those of the teachers and more effectively meet the increasingly diversified needs of pupils.(1)

The foreseeable increase in the number of candidates for teaching posts will perhaps have the advantage of promoting better selection through the establishment of more satisfactory criteria for entry into the profession. Although there is as yet no conclusive evidence from studies undertaken in this field (2), in future greater consideration may be expected to be given to the prior social experience and maturity of candidates (3), as indicated by the current debate on this matter in the Scandinavian countries. Entry into the profession should itself be the result of a well thought out choice by the individual, based on detailed information on not only expected teacher demand but also on the tasks to be carried out and the aptitudes and qualifications needed to accomplish them. Similar types of information should also be available to teacher training establishments, as a basis for deciding on entry criteria and needed adjustments to their training programmes. Such criteria and programmes would need to take account of the reality that many of the new entrants may still be groping for a vocational identity and career and should be able to opt out without serious consequences to their subsequent choices.

---

(1) Experiments in this field are described in Volume III of the series of studies: "Teacher Tasks in Innovative Schools", under the heading: Utilisation of teacher aides in some European countries and in the United States, (OECD, Paris 1977). This of course remains a highly controversial subject and continues to meet with resistance on the part of teacher organisations who suspect the motivation behind such moves as primarily aimed at diluting the teaching profession and the responsibility of the teacher in managing the teaching/learning process in schools.

(2) In this connection, see the study by S. Marklund and B. Gran: "Research and innovation in teacher education" in New Patterns of Teacher Education and Tasks - Country Experience: Sweden, OECD, Paris, 1974.

(3) The conclusion reached by D.S. Anderson after his study on The Development of Student-Teachers - A Comparative Study of Professional Socialisation (New Patterns of Teacher Education and Tasks, OECD, Paris, 1974).

The increase in the number of candidates for the teaching profession might also make it possible to resolve a number of specific problems inherited from situations which prevailed in the past and which apply in different degrees in individual Member countries. Examples of such problems are:

(i) the abolition of pre-recruitment systems, where they still exist in spite of teacher surpluses, (i.e. systems providing financial aid to student teachers on condition that they commit themselves to teaching at the end of their training), since the financial advantages provided sometimes tend to attract candidates who, though no doubt subject to strict academic selection, do not necessarily have any real motivation in regard to the profession itself;

(ii) the alleviation of chronic sectoral shortages of teachers;

(iii) attempts to establish, where necessary, a more representative sex distribution among the various roles and functions of the school, including a better balance between men and women in school positions of administrative responsibility;

(iv) reduction of overtime insofar as this is compatible with essential flexible staff use;

In combination with the new training and utilisation policies mentioned below, these measures as a whole might have the advantage of improving the image and status of the profession, and by the same token its attractiveness. It can be assumed that the profession will in future be far more dependent than in the past on renewed roles that are much broader and varied (1) so as to respond to the greater diversity of tasks to be accomplished. This underlines the need for ensuring the continuous improvement of the professional qualifications of teachers, not so much in terms of greater specialisation, but rather of training for broader functions. Up until recently the profession has been steadily expanding - by systematic and virtually single-minded measures to reduce the size of classes -while teaching methods have not always been basically renewed (2) and without any significant change in career prospects The new functions are in fact slow to develop, and the moreor less hierarchical compartmentalisation of levels of education (depending on the country) tends to restrict mobility within the profession. In a situation of contraction or levelling-off of numbers, the aging of the teaching body and the lack of career opportunities imaginative approaches are called for in order to maintain the health and dynamism of the profession.

---

(1) These changes in the teacher's role have been analysed and described in the study : The Teacher and Educational Change - A New Role- Vol. I - General Report, OECD, Paris, 1974.

(2) This important issue is dealt with in detail in D. Pidgeon's study : "Class Size as a Factor of Pupil Performance - A Policy Analysis" in New Patterns of Teacher Education and Tasks - General Analyses, OECD, Paris, 1974.

IV - TRAINING

The meeting point in the articulation of recruitment and training policies is the selection of criteria for access to training. Subject to legal adjustment where open access has to be guaranteed to secondary school leavers with certain types of formal qualifications, these criteria can be adjusted to modify teacher supply. In recent years, when demand was diminishing substantially, the temptation has been to go on using purely academic criteria; they are ostensibly more objective and easier to apply in practice. Over-emphasis on such criteria is in conflict with the view that the prime requirement for a teacher is a well-balanced personality, a gift for dialogue, a responsive attitude towards the pupil's socio-cultural background, and, generally speaking, an adequate level of maturity, preferably including experience which is not limited to that of the school itself(1).

While in no way denying the difficulty of developing and testing new recruitment and selection criteria (see page 12 above) it would be useful to encourage experiment with various forms of self-selection, whereby candidates for the teaching profession are provided with regular opportunities to put their interest and qualifications to the test. This could take the form of preliminary orientation courses, prior to definitive entry into training and/or broad teaching practice, during semi-specialised training periods. Close observation of his own reactions and difficulties, with the assistance of his trainers, would thus still enable a student teacher to seek a rapid reorientation of fields of study(2) in the event that both parties agreed that the original choice was a failure.

Where the actual content and methods of training are concerned, it would seem desirable to try and tailor them more effectively to what will in fact be required of the teacher in his or her school. Many of the present characteristics of training are obviously not conducive to the development of the new roles expected of teachers (3). It is suggested that such training should be increasingly adjusted to respond to the following requirements:

---

(1) In the context of the Education Committee's activities on "Admission Policies in Post-Secondary Education", a special study is being carried out on the process of selection for access to the teaching profession which will make it possible to assess recent developments in Member countries in this area.

(2) Provided the various components of higher education are sufficiently integrated; in this connection, see Chap. VIII, "Policy Implications" of the study :"Present situation and future prospects of teacher supply and demand in Member countries" (page 64).

(3) Reference may be made to the analytical reports by A.L. Hyer and R.H. McClure, "New Patterns of Teacher Tasks and their Implications" and S.J. Eggleston :"Initial and Continuing Training of Teachers : New Trends and Concepts", based on Belgian, French, Swedish, United Kingdom and United States case studies published in New Patterns of Teacher Education and Tasks : General Analyses, op.cit.

(i) increased attention to the concept of learning, in conjunction with that of teaching, and more systematic respect for the pupil's integrity and whole personality;

(ii) improved initiation to team work;

(iii) better balance between knowledge of subject-matter and understanding of the sciences of education;

(iv) the development of realistic pluridisciplinary approaches to the teaching/learning process with all that this implies for the re-organisation of school curricula;

(v) closer initiation into socio-economic problems in general and those of the immediate school environment in particular, and to the problems of change, so that the teacher is enabled not only to live with change, but also to contribute to the necessary promotion of change;

(vi) greater emphasis on the concrete needs of schools, especially by means of a more profound approach to teaching practice, integrated into a process of critical and theoretical evaluation which should accompany the various stages of training;

(vii) in relation to point (vi), the development of a coherent basic training and participation in action research such as, for example, on curriculum development; and of an effective system of formative and recapitulative evaluation of the training acquired in relation to objectives, as regards the progress of the teacher himself as well as that of his pupils.

It is difficult to say whether developments in the directions mentioned above could take place with or without a prolongation of existing training periods, since conditions vary considerably within the hierarchical structure of the profession. It would therefore be useful to investigate to what extent the existing period of teacher training is compatible with the types of qualification needed to match the evolution of courses at the various levels of the education system. It seems in any case, increasingly necessary to move towards more integrated forms of training, so as to promote not only the necessary degree of unity at certain levels of the education system (for example, compulsory schooling) (1), but also greater mobility of teachers throughout their careers. One of the supplementary advantages of such a policy would be greater facility in coping with likely fluctuation in supply and demand among the various levels of the education system, facilitated by appropriate in-service training.

---

(1) In this connection, see the approaches developed in: "Teacher policies at the level of compulsory education - A clarifying report", (Part Three of this volume).

It would be logical for measures along these lines to be accompanied by corresponding changes in the role and training of teacher trainers and the more flexible use of the various categories of such trainers.(1) For example, an increasing number of teacher trainers could come from the schools themselves, either on a temporary or part-time basis, to back up the work of staff in the training establishments. Such a change would be in line not only with the increasing need for training to be school focussed, but also with the requirement for greater openess, mobility and exchange of information and training among peers. Teacher trainers, while remaining in regular contact with the realities of the classroom (possibly by means of a system of alternation and exchange of functions) would also need to be more actively involved in research and development activities and in curriculum development. They should accordingly be the first to benefit from in-service training.

The systematic development of in-service training is a key factor in any fundamental change in teacher policy management. It may indeed be regarded as the pervasive strategy for a dynamic policy, the more so because: fewer newly-qualified young teachers are entering the profession; fewer teachers are leaving in view of the economic recession; a considerable number of women teachers return after prolonged absence in a situation where women continue in many countries to represent a large, if not the largest, component of the profession. A coherent policy in this field could thus respond to the requirements of the education system as well as to the needs of individuals, whether in terms of job satisfaction and deeper commitment to their profession or greater mobility and career prospects.

A coherent policy for in-service training would need to distinguish among the various training measures to be taken as they relate to sub-objectives which have their own special features, such as (2):

(i) retraining linked to inadequate initial training (whether general or vocational) and to changes in educational objectives, structures, content and methods;

---

(1) An example of a systematic approach to this problem is given in the study by B. Thelin: "The training and recruitment of teacher trainers in Sweden", in: *The Teacher and Educational Change: A new role - Vol. I - General Report*, *op.cit*.

(2) An attempt to summarise the most recent experiments on the basis of ten national monographs can be found in the CERI study: *Innovation in the in-service education and training of teachers, practice and theory*, OECD, Paris, 1978.

(ii) further training in the same post;

(iii) training periods of varying length in the economic, social and cultural institutions of the community;

(iv) preparation for a change of employment:

  - whether within or outside the education sector, the latter being particularly cogent in the present situation of teacher unemployment;
  - with or without promotion, involving a move from one level of education to another or a change of duties (management, inspection, training of teachers, etc.), and where necessary, distinguishing between individual promotion and the upgrading of an entire teacher category.

Such a policy, combined with other recruitment and initial training measures, would facilitate any redeployment of teachers which may be required as a result of fluctuating pupil enrolments at various levels of the education system.

Priority in favour of in-service training, even where imposed by circumstances, does not however, simply imply the use of specific conjunctural measures for immediate retraining purposes. A desirable goal would be to move towards a structural policy designed to co-ordinate the initial training, the period of induction(1) in the first teaching post and in-service training within the overall context of a system of continuing education, apt to facilitate continuous adaptation to essential changes in the education system. As initial and in-service training measures are becoming increasingly diversified, the number of bodies and institutions responsible for them will tend to increase and their role will certainly be modified. Co-operation among various partners (Universities, non-university higher education colleges, teacher training colleges, teacher or education centres, national and local education authorities and agencies and their inspectors and advisers, schools themselves, etc.) will accordingly have to be strengthened (through associations, networks, consortia, etc.). It is unlikely that teacher training establishments - as all other types of establishment - will in future be confined to a strictly monotechnical framework, which is poorly equipped to foster mobility, flexibility and adaptation of either training or those being trained.

V - MEASURES TO IMPROVE WORKING CONDITIONS

If optimum environmental and working conditions are to be achieved in the schools, the learning experience acquired by young teachers in various places should not differ unduly from the role and duties they will later assume; this is all the more so in view of the fact that the new roles and tasks which are developing tend increasingly to disorient the existing teaching staff. Systematic surveys may therefore be needed to show how practising teachers perceive their role and to elucidate the nature of new working conditions.(1) The Organisation's work on Roles and Tasks, already referred to, may help to clarify the current debate on this matter. It is essential to encourage reciprocal exchange of information between schools and training establishments, based particularly on the growing number of experiments with school-focussed or school-based teacher training. (2)

---

(1) The most systematic experiments in this area have been carried out in England and Wales: see the monograph by R. Bolam and J. Porter: Innovation in in-service education and training of teachers: United Kingdom, OECD/CERI, Paris, 1976.

In addition to in-service training, the teacher should be able to count on permanent support from the administration(3), both at the beginning of his career and later, to be provided as much by various human resources (specialists, aides, counsellors, etc.) as by material facilities (teaching centres(4) educational documentation/or research centres, various types of equipment, functional architecture) (5).

---

(1) An example of this type of survey is provided by the case studies published by the Organisation in the series: *Teacher Tasks in Innovative Schools : Volume I: Primary Schools: United States, Netherlands, United Kingdom:* and *Volume II: Compulsory Secondary Education: Belgium, Norway, United Kingdom* , and summarised in "Analysis of teacher tasks in selected innovative schools", *op.cit*.

(2) In the context of CERI's work on Innovation in In-Service Training of Teachers, the conclusions of the Stockholm Conference (20th - 22nd October, 1976) on "Strategies for School-focussed Support Structure for Teachers in Change and Innovation" lay stress on the concepts and methods, organisational problems and the training of facilitators from the standpoint of actual school requirements.

(3) Potential policies in this field are given in detail in R. Bolam's study: "The types of environment most likely to favour the active and effective participation of teachers in educational innovations" in *New Patterns of Teacher Education and Tasks - Teachers as Innovators*, OECD, Paris 1976.

(4) The experience with English teachers' centres has been analysed in L.C. Taylor's study: "Teachers' centres - some reflections on the British experience", published in *New Patterns of Teacher Education and Tasks - Teachers as Innovators* , *op. cit*; an international comparative study of these establishments is currently in hand under the CERI programme.

(5) The actual participation of teachers in school building projects is discussed in B. Rhode's study: "Teachers and School Building" published in *New patterns of Teacher education and Tasks - Teachers as Innovators* , *op.cit*.

Teachers' duties and the relevant timetables should be compatible with the recent development of such tasks as:

(i) team-work with colleagues;

(ii) individual counselling for pupils;

(iii) contact with parents and the local community;

(iv) in-service training;

(v) action research activities;

(vi) participation by teachers in the planning and managemer of the school or in expressing their views about the development of the education system as a whole.

So long as teachers are increasingly required to provide their pupils with an understanding of the concepts of responsibility and autonomy, it is difficult to see why they should be denied the opportunity of assuming their own responsibilities in this area and of effectively participating in the management of their schools and in the debate about general developments affecting the educational system. Moreover, the individualisation of teaching which the teacher is called upon to introduce would need equally to be reflected in the attitude the administration adopts towards the teachers as individuals, with due regard to their reactions, aspirations and professional commitment.

It has already been remarked that the economic and social uncertainty surrounding the next few years, coupled with the specific problem of the declining birth rate, may well limit career opportunities for teachers, within or outside the education system. A more comprehensive basic training and in-service training facilities to foster personal development and greater professional adaptability might make it easier for teachers to move within the system, to the extent that a degree of diversification of duties and tasks would offer a wider choice of posts during working life than at present. Provided the economic situation permits, such training and the experience acquired might also lead to greater external mobility for teachers by enabling them to work in other sectors on a permanent or temporary basis, in the course of their careers. It is suggested that growing teacher unemployment in many Member countries will bring issues of this kind to the political forefront of discussions concerning the general employment situation and the distribution of job opportunities among various professional and social categories of the population. This might well be an area where the Organisation might play an important role in facilitating the analysis and exchange of experience among Member countries.

In conclusion, it seems evident that the mechanisms for recruitment, training and deployment of the teaching body are closely inter-related and influence one another. Any decision taken in the broader context of changes affecting education systems should therefore take account of this need for consistency. Moreover, demographic and/or economic as well as educational constraints will call for increasing mobility among personnel in the education sector. It would therefore be advisable that the training of the various categories of personnel should be as similar as possible and in consequence be seen as an integral part of a renewed and diversified higher education system, consistent with the diverse qualifications, particularly educational qualifications, which our societies will increasingly need.

REFERENCES

List of studies* and reports prepared under the aegis of the Working Party on Teacher Policies.

- The Teacher and Educational Change : A New Role - Volume I, General Report, OECD, Paris, 1974.
- The Teacher and Educational Change - Volume II : Recent Trends in Teacher Recruitment, OECD, Paris, 1974.
- New Patterns of Teacher Education and Tasks - General Analyses, OECD, Paris, 1974.
- New Patterns of Teacher Education and Tasks - The Development of Student-Teachers - A Comparative Study of Professional Socialisation, OECD, Paris, 1974.
- New Patterns of Teacher Education and Tasks - Country Experience : Belgium, France, United Kingdom, OECD, Paris, 1974
- New Patterns of Teacher Education and Tasks - Country Experience : Sweden, OECD, Paris, 1974.
- New Patterns of Teacher Education and Tasks - Country Experience : United States, OECD, Paris, 1974.
- New Patterns of Teacher Education and Tasks : Teachers as Innovators, OECD, Paris, 1976.
- New Patterns of Teacher Education in Canada and Japan, OECD, Paris, 1975.
- The Institutions Responsible for Teaaher Training : Issues and New Trends in Some European Countries and in North America, OECD, Paris, 1975.
- Teacher Policies - General Report of the Conference, OECD, Paris, 1976.
- Teacher Tasks in Innovative Schools - Volume I Primary Schools : United States, Netherlands, United Kingdom OECD, Paris, 1977.
- Teacher Tasks in Innovative Schools/Tâches des enseignants dans des écoles innovatrices - Volume II- Compulsory Secondary Education : Belgium, Norway, United Kingdom/Enseignement secondaire obligatoire : Belgique, Norvege, Royaume-Uni, OECD, Paris, 1977.

---

* The detailed content of each Volume is given in the "Annex I : Background Documentation" of the proceedings of the 1974 Intergovernmental Conference : Teacher Policies - General Report of the Conference, op.cit.

- Teacher Tasks in Innovative Schools - Volume III - Utilisation of Teacher Aids in some European Countries and the United States, OECD, Paris, 1977.
- "Present Situation and Future Prospects of Teacher Supply and Demand in Member Countries" (Part Two of this volume).
- "Teacher Policies at the Level of Compulsory Education - A Clarifying Report" (Part Three of this volume).
- "Analysis of Teacher Tasks in Selected Innovative Schools - General Report" (Part Four of this volume).

PART TWO

PRESENT SITUATION AND FUTURE PROSPECTS OF TEACHER SUPPLY AND DEMAND IN MEMBER COUNTRIES

Report by the Secretariat

I - INTRODUCTION

This report presents an analysis of replies sent by Member countries to the questionnaire on recent trends in teacher supply and demand. The questionnaire was drawn up by the Secretariat in the context of the activities of the Education Committee's Working Party on Teacher Policies. The purpose of the questionnaire (the text is given in annex), was to collect quantitative data on the present situation and future trends in teacher supply and demand at primary and secondary levels, together with qualitative information on the causes of possible imbalances and the form they take, and on policy measures adopted or planned for regulating supply and demand.

Of the 18 countries which have replied (1), Ireland and Norway said that the information requested was not available or did not correspond to the situation in the country. A preliminary general remark is called for concerning these replies : this relates to the complexity and frequently the novelty of the problem arising in these countries and the difficulties they have in solving it. While most are concerned about actual or possible teacher surpluses, frequently accompanied by sectoral, geographic or specialist category shortages, few have envisaged or are considering original measures for remedying this situation (2). Moreover, in some cases, little seems to be known about the actual degree of imbalance. In view of this, the present report, which aims to compare the different countries' problems and the solutions they intend to adopt, is rather incomplete on certain points.

---

(1) Australia, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Sweden, Turkey, United Kingdom (England and Wales; Scotland was unable to take part in this exercise) and the United States.

(2) Teacher surpluses (supply exceeding demand) or shortages (demand exceeding supply) can only be evaluated in relation to a given demand situation and its component factors, especially the types of education and educational activities taken into account, and the teacher utilisation norms (pupil/teacher ratios, service obligations, duties and tasks, etc.) and, as necessary, utilisation norms regarding other factors automatically entails an upward or downward change in demand.

II - QUANTITATIVE TREND OF TEACHER SUPPLY AND DEMAND

In the guidelines sent out by the Secretariat, countries were asked, in particular, to complete a table showing teacher supply and demand trends between 1975 and 1985-90. Since these forecasts, as in all exercises of the same type, are uncertain, subject to revision and depend on factors taken into consideration which vary by country, and since international comparisons are especially difficult and delicate in this area, the data for each country have been set out separately, usually in their original form with a summary of any accompanying methodological notes. No synthetic table has been drawn up.

Germany

Future teacher supply has been calculated by the appropriate services of the different Länder on the recommendation of the Data Commission of the Conference of Ministers of Education of the Länder, which co-ordinated the results. While the forecasts are based on the extrapolation of recent trends, recently adopted policy measures are taken into account. The teacher/pupil ratios used for the demand figures are those selected by the General Plan for Education which was approved in 1973 by the heads of the Federal Government and the Länder Governments. The school enrolment projections were drawn up by the Data Commission of the Conference of Ministers of Education.

GERMANY

Teacher supply and demand by level of education

	1974/75 1)	1979/80	1984/85
	Actual	Projected	
		A. Supply 2)	
Primary	129,493	.	.
Secondary - general	255,918 (97,818)3)	. (115,300)3)	. (163,300)3)
Special	31,064	.	.
TOTAL	416,475	467,400	567,600
Secondary - technical	57,991	60,500	75,500
full-time	29,796	.	.
part-time	28,195	.	.
GRAND TOTAL	474,466	527,900	643,100
		B. Demand 1)	
Primary	124,473-136,920	121,300-137,800	107,900-130,600
Secondary - general	257,672-268,456	290,600-315,200	251,300-273,900
Special	27,534	33,100	32,200
TOTAL	409,679-432,910	445,000-486,100	391,400-436,700

	1974/75 1)	1979/80	1984/85
	Actual	Projected	
Secondary - technical	65,301	84,100	92,200-101,300
full time	33,629	45,900	54,900- 64,000
part time	31,672	38,200	37,300
GRAND TOTAL	474,980-498,211	529,100-570,200	483,600-538,000

C. Imbalances between supply and demand

	1974/75 1)	1979/80	1984/85
Primary	+ 3,266 - 19,965		
Secondary - general	+ 3,266 - 19,965		
Special	+ 3,530		
TOTAL	+ 6,796 - 16,435	+ 22,400 - 18,700	+176,200+130,900
Secondary - technical	- 7,310	- 23,600	- 16,700 -25,800
full-time	- 3,833	.	.
part-time	- 3,477	.	.
GRAND TOTAL	- 514 - 23,745	- 1,200 - 42,300	+159,500+105,100

1) Full-time equivalent

2) Full-time qualified teachers expressed in terms of individuals and part-time qualified teachers expressed in full-time equivalent

3) Secondary general (type a).

Australia

The teacher supply and demand projections for the whole of Australia have been drawn up from individual estimates for the States and Territories, adjusted as needed to allow for differences in the interpretation of definitions. They generally disregard technical and further education and pre-primary education, but include heads of establishments, senior, permanent and temporary teachers and other staff categories paid as teachers and regarded as such by the State education departments. Pupil-teachers, teachers on unpaid leave and occasional replacement teachers are excluded.

Supply is defined as the number of teachers likely to be seeking employment during the reference period. It includes teachers continuing in the same system as during the previous year, new entries and teachers from other sources (re-entries and teachers from another State or from Overseas, excluding planned recruitment), which, while little affecting the situation for Australia as a whole, may significantly alter the balance between supply and demand at individual state level. Demand is calculated on the basis of enrolment projections and based on two assumptions : that (a) the pupil/teacher ratio would remain unchanged from 1976 to 1986; (b) that it would decline over the same period.

AUSTRALIA

Comparison of Teacher Demand and Supply Estimates

	1976	1981		1986	
	Actual	(a) Existing standards	(b) Improved standards	(a) Existing standards	(b) Improved standards
Primary					
Demand	84,300	91,600	100,100	88,300	104,500
Supply		107,000	107,000	120,200	120,200
Excess of supply over demand		15,400 (13%)	6,900	31,900	15,700
Secondary					
Demand	79,500	81,200	89,300	89,100	100,400
Supply		110,800	110,800	125,900	125,900
Excess of supply over demand		29,600 (28%)	21,500	36,800	25,500

Canada (1)

This country has only provided projections on teacher demand. They take account firstly, of the number of teachers required for the enrolments of and secondly of departures from the profession and are based on the assumption of a slight reduction in the number of elementary school pupils per class (1/10th of 1 per cent fall per 50,000 enrolment decline) and the number of pupils per member of professional staff (whether teaching or not) in secondary schools (down from 17.6 to 16.7).

CANADA

Estimated demand for new teachers

Teacher demand	1977-78	1980-81	1985-86	1990-91
For Elementary Schools	10,694	12,132	13,302	14,997
For Secondary Schools	3,710	900	3,379	4,225
Total Demand	14,404	13,032	16,681	19,222

The demand for 1977-78 may be compared with the number of diplomas, certificates and degrees in education awarded in 1976-77, which amounted to over 25,000.

---

(1) The information concerning Canada has been taken from a paper entitled "Future Teacher Demand" presented by Miles Wisenthal at the Annual General Meeting of the Canadian College of Teachers, Ottawa, Ontario, on 8th July 1977.

Dermark

Supply has been calculated in terms of individuals without taking account of labour laws, the number of working hours, etc. The use of part-time teachers means that the figures in the table are higher than they would be for the full-time equivalent. Demand is expressed in full-time equivalent on the assumption that the service obligations for the various teacher categories would remain the same as thay were in 1975. As regards primary and first cycle secondary education, only teachers who are or wish to be employed in public (municipal) schools are included. It has been assumed that over the whole period covered by the forecasts the breakdown of teachers between public and private schools would be unchanged. Demand refers only to public schools. For second cycle or secondary education, supply includes all university graduates in natural sciences/humanities whether they wish to teach or not, and demand refers only to general education.

DENMARK

Teacher supply and demand
(thousands)

	1974	1980	1985	1990
Primary and first-cycle secondary 1)				
Supply	40,8	52,8	57,7	62,8
Demand	45,8	51,1	47,4	46,9
Second-cycle general secondary 2)				
Supply	8,9 3)	14,2	...	32,0
Demand	4,6	6,1 - 6,8		6,7 - 7,5

1) Public (municipal) schools only.

2) Total university graduates in Natural sciences/Humanities. In 1974, 4,100 (out of 8,900 in employment) taught in second-cycle general secondary schools.

3) End 1975.

United States

The supply expressed in full-time equivalent (in 1970 less than 1 per cent of teachers were employed part-time and this proportion has been retained) has been calculated on the assumption that 22.5 per cent of the holders of a "bachelor's degree" (first university degree) would wish to become teachers. Owing to the lack of reliable estimates persons seeking to re-enter the system are not taken into consideration. Demand takes account of three factors, i.e. the replacement of departures, trends in enrolments and in pupil/teacher ratios.

UNITED STATES

Teacher supply and demand
(thousands)

		1975	1980	1985
Primary	Supply	n.a.[1)]	n.a.	n.a.
	Demand	1,354	1,362	1,498
Secondary	Supply	n.a.	n.a.	n.a.
	Demand	1,109	1,043	986
TOTAL	Supply	2,492	2,515	2,525
	Demand	2,463	2,405	2,484

1) Data on supply are not available for each level of education.

Finland

Full-time teachers are defined as teachers employed permanently or temporarily and those paid by the hour and working full-time. Part-time teachers in primary and general secondary education could not be expressed in full-time equivalent owing to lack of information regarding the number of hours worked. The data cover the situation in 1975 and that forecast for 1980.

FINLAND

Situation in 1975

Primary	
Full-time teachers	18,805
- of whom not fully qualified 1)	900
Part-time teachers	720
General secondary (a)	
Full-time teachers	17,680
- of whom not fully qualified 1)	2,670
Part-time teachers	5,590
General secondary (b)	
Full-time teachers	815
- of whom not fully qualified	70
Technical secondary (a) 2)	
Full-time teachers	240
- of whom without formal qualifications	55
Part-time teachers	410
- of whom without formal qualifications	220
Full-time equivalents for part-time teachers	385
- of whom without formal qualifications	130
Technical secondary (b) 3)	
Full-time teachers	6,860
- of whom without formal qualifications	1,800
Part-time teachers	7,990 4)
- of whom without formal qualifications	2,480
Full-time equivalents for part-time teachers	3,050
- of whom without formal qualifications	1,845

---

1) Excluding teachers paid by the hour.

2) The estimated ratio of technical college teachers is 42 per cent of the total number of teachers in higher technical establishments.

3) The estimated ratio of technical school teachers is 58 per cent of the total number of teachers in higher technical establishments, and that of teachers in nursing colleges is 39 per cent of the total number of teachers in nurses' training establishments.

4) Excluding 1,660 lecturers and assistant-lecturers.

Supply figures in 1980 for primary, general secondary and technical secondary education have been calculated by adding the number of teachers who will obtain the necessary qualifications between 1976 and 1980 (93 per cent of whom should find a post) to the number of full-time teachers in the system in 1975 and 1980, excluding those not fully qualified.

Supply could not be estimated for type (a) technical secondary education owing to the variety of qualifications required by the different establishments. Demand forecasts were based on the Board of Education's 1977-81 Plan. The imbalances between supply and demand are offset by the fact that some general secondary teachers can teach either in primary or technical schools and that professionals without formal teaching qualifications can be recruited for the tasks.

FINLAND

Teacher supply and demand

Primary	
Supply	18,400
Demand for full-time teachers	19,370
Demand for part-time teachers	990
General secondary	
Supply	17,570
Demand for full-time teachers	16,760
Demand for part-time teachers	5,275
Technical secondary (a)	
Demand for full-time teachers	400
Demand for part-time teachers	330
Total demand in full-time equivalent	515
Technical secondary (b)	
Supply of formally qualified teachers	7,170
Demand for full-time teachers	8,570
Demand for part-time teachers	3,290
Total demand in full-time equivalent	9,860

France

In France, the variety of teaching staff at the different levels makes it difficult to forecast the supply although teacher demand trends give some idea of the future situation. For primary education the Seventh Plan has selected two priority objectives, namely: (1) to give all staff initial teacher training and train a sufficient number to avoid the use of auxiliary staff and (2) the right to one full year of in-service training during a teacher's working life. If "higher assumptions" are taken for the period 1976-80, teacher requirements may be put at 58,500, meaning that 11,700 new primary teachers would have to be trained each year and the number of places in teacher training colleges considerably increased (26,500 instead of the present 14,500). However, in view of the predicted reduction in primary school enrolments after 1980 and to prevent the capacity for accommodation of teacher training colleges from expanding and retracting too suddenly, a compromise solution will probably be adopted. On the other hand, in general secondary and theoretical technical education, teacher requirements in the different categories should fall considerably, as shown in the following table :

	Recruitment 1976	1976-80 requirements Annual average
Secondary teachers (Agrégés)	1,600	672
Certified teachers	5,000	2,692
General secondary teachers (PEGC)	2,580	2,078
Total	9,180	5,442

Finally, in the short second-cycle secondary, new teacher requirements for the various categories should rise from 1,326 in 1976 to 1,800 in 1979 falling again to 1,304 in 1980.

Italy

In primary education the supply has been calculated by adding to teachers in employment in 1974 and 1980 the number of teachers expecting to graduate from primary teacher training colleges during this period estimated on the basis of trends in the last few years. Since in first and second cycle secondary education any type of university degree qualifies a person to teach, supply figures have been estimated by adding the number of graduates for the period 1974-80, based on trends recorded during recent years, to teachers already in service. Demand covers only public schools - private schools employing five per cent of the total number of primary and first-cycle secondary teachers and 12 per cent of second-cycle secondary teachers.

ITALY

Teacher supply and demand

	1974	1980
Primary		
Supply	275,644	527,644
Demand	232,645	216,432
Secondary		
Supply	433,843	833,843
Demand	380,899	493,201

Japan

In Japan, primary teachers are generally trained in specialised establishments (teacher training colleges or universities), while secondary teachers are recruited among graduates from ordinary college or university who have obtained a teacher's certificate, many of whom go into other professions. The supply figures for a given year therefore include all college and university graduates who will obtain a teaching certificate during the reference year. Demand refers to the additional number of teachers who must be recruited compared with the previous year to allow for increased enrolments, changes in the number of pupils per class and departures.

JAPAN

Teacher supply and demand

	1975 (Actual figures)	1980	1985
Primary			
Supply	21,000	23,000	20,000
Demand	20,000	23,000	23,000
First cycle secondary			
Supply	89,000	95,000	95,000
Demand	7,000	11,000	12,000

New-Zealand

The main purpose of supply forecasts is to determine the number of new admissions to teacher-training colleges needed to meet long-term demand, whereas short-term fluctuations are dealt with by increasing or reducing the number of non-tenured teachers or by recruiting teachers from outside the system.

NEW-ZEALAND

Teacher supply and demand
(thousands)

	1974	1980	1984
Primary			
Supply	19,2	19,6	20,1
- of which teachers remaining from the previous year	16,0	16,3	16,7
- recruited outside the system	1,1	1,1	1,2
- teacher training college graduates	1,8	1,7	1,7
- untenured	0,3	0,5	0,5
Demand	19,2	19,6	20,1
Secondary			
Supply	11,3	11,9	12,3
- of which teachers remaining from the previous year	8,7	9,6	10,2
- recruited outside the system	0,9	0,9	0,9
- teacher training college graduates	0,8	1,0	1,0
- untenured and part-time	0,9	0,4	0,2
Demand	11,3	11,9	12,3

Netherlands

Supply figures refer to the total number of students who successfully complete teacher training courses, and the demand figures cover the total number of new teachers to be recruited.

NETHERLANDS

Teacher supply and demand

	1975-76	1979-80	1984-85
Primary			
Supply	7,510	7,907	..
Demand	9,906	6,589	..
General secondary			
Supply	..	..	..
Demand 1)	..	2,176	1,655
Lower technical secondary			
Supply	..	..	..
Demand 1)	..	3,777	2,604

---

1) Average annual demand for teachers of grades 2 and 3 from early 70's to 1979/80 or 1984/85.

Sweden

The purpose of the projections made by the National Education Board and the Forecasting Institute is (a) to determine future teacher demand, (b) project present teacher stocks and (c) calculate the yearly teacher "output" which will balance the supply against the demand in a given future year. For this reason no supply projections are made. The calculated yearly teacher "output" needed to balance supply against demand will be compared with the number of students admitted into the various types of teacher training establishments in recent years in order to determine whether future surplus or shortage is likely.

SWEDEN

Demand for various categories of teacher
at primary and secondary levels - Full-time equivalents

	1975	1980	1985	1990
Lower primary	22,420	21,120	20,900	20,470
Upper primary	21,490	21,120	21,170	20,680
Theoretical subjects	25,340	28,770	27,270	26,830
Special subjects	12,620	13,830	13,030	12,930
Vocational subjects	5,820	6,890	6,840	6,650
Heads of establishment (excluding teaching hours)	1,890	1,890	1,890	1,890
TOTAL	89,580	93,620	91,100	89,450

Supply of qualified teachers, Spring 1975

	Total	of which on holiday
Lower primary	26,020	3,630
Upper primary	25,260	2,930
Theoretical subjects	32,880	3,340
Special subjects	12,980	1,340
Vocational subjects	7,240	560
TOTAL	104,380	11,800

Turkey

This country has supplied no information on the method of reckoning teacher supply and demand.

TURKEY

Teacher supply and demand

	1970	1975	1980	1985
Primary				
Supply	132,721	173,000	180,000	210,000
Demand	130,700	162,015	200,000	232,000
Difference	2,021	10,985	- 20,000	- 22,000
First cycle secondary				
Supply	22,301	24,693	61,436	74,868
Demand	40,351	55,111	72,577	91,244
Difference	- 18,050	- 30,418	-11,141	- 16,376
Second cycle secondary - general				
Supply	7,730	9,956	12,980	16,760
Demand	11,750	14,693	18,510	21,753
Difference	- 4,020	- 4,737	- 5,530	- 4,993
- vocational and technical				
Supply	3,150	4,150	5,185	6,220
Demand	5,250	8,800	13,842	20,474
Difference	- 2,100	- 4,650	- 8,657	- 14,254

III - FACTORS AFFECTING TEACHER DEMAND

These factors may be grouped under four headings :

- Enrolment trends
- Pupil/teacher ratio
- Other qualitative changes (including changes in teachers' service obligations or in pupil's timetables)
- Opportunities for in-service training

(1) Enrolment trends

Pupil numbers at a given moment and for a given level depend on the size of the corresponding age-group and therefore on demographic factors. In many countries, the lower birth rate over several years is directly responsible for a fall in school enrolments beginning at the primary level and continuing into the succeeding levels. For instance, Germany forecasts 2.2 million fewer pupils in 1984/88 than in 1974/75; in England and Wales, between 1975 and 1986, primary school enrolments should fall from 4,833,000 to 3,407,000 and compulsory secondary school enrolments from 3,530,000 to 3,154,000, whereas post-compulsory secondary enrolments are forecast to rise from 258,000 to 343,000. In Canada, the number of enrolments in kindergartens and elementary schools (8 years'schooling) should fall from some 4 million in 1972 to 3.32 million in 1981, rising thereafter to 3.67 million by 1990. On the other hand, secondary school enrolments, which reached their peak in 1975 (1.83 million), should fall steadily but rather slowly until 1978 (1.77 million), then much more quickly up to 1983 (1.44 million) and once again fairly slowly but nevertheless persistently until they are down to 1.34 million in 1990. Although the trend may not follow exactly the same curve in every Province, total secondary school enrolments should fall by half a million in 14 years, i.e. by 27 per cent. Similarly, in France, the fall in enrolments after 1980 should involve 150,000 pupils in each of the five years of primary school and thus be felt in the first cycle of secondary education as from 1977. In Australia, owing to the drop in the birth rate (from 276,000 in 1971 to 228,000 in 1976) primary school enrolments should continue to rise up to 1980 and then sharply decline until 1986, while secondary school enrolments should taper off until 1980, rise between 1980 and 1985, and then again decline. Lastly, in Sweden, in view of the reduction in the number of pupils, teacher demand should fall by 10 per cent for the first three years of primary education between 1974/1975 and 1977/1978, and it would be almost unnecessary for the teacher training colleges to accept new students for the first three years of primary education between 1975/76 and 1983/84. On the other hand, in Japan, the rise in enrolments experienced in the primary schools since 1974 should pass on to secondary level as from 1980.

However, it should be noted that certain countries, which have made longer-term projections, predict, while pointing to the uncertain nature of forecasts in this field since the future fertility rates on which they are based are particularly difficult to estimate, a reversal of the situation and a rise in the school-age population in the relatively near future (1) : 1987 for primary education and as from 1992 for compulsory secondary education in England and Wales, and 1984 in the United States. The following graph, which clearly illustrates the short and long-term trends of the various population age-groups in Canada and the consequent trend of the various population age-groups in Canada and the consequent trend of school enrolments, is taken from a study published in Canada (2). This study is particularly interesting in that it stresses among other things that the educational planners must take account of variations in the population and of their repercussions on each level of the educational system. It must be emphasized that this is an extremely important factor which must be taken into account when deciding the measures needed to adjust teacher supply to demand, and especially those concerned with closing down teacher training colleges or reducing their reception capacity. According to a recent report by the OECD Manpower and Social Affairs Committee (3), the trough of the demographic curve for many countries appears to be around 1975, after which the number of births per 100 inhabitants is likely to rise because of increasing the number of women of child-bearing age, but in most cases without reaching the figures observed between 1950 and 1960 (especially in Austria, Canada, France, Germany, Ireland, Italy, Luxembourg, Spain, the United Kingdom and the United States). On the other hand, in some countries, the number of births per 100 inhabitants continues to fall, but less rapidly than from 1950 to 1975 (Australia, Denmark, Finland, Japan, New Zealand, Norway and Turkey).

---

(1) The expected rise in the number of births and then of school enrolments is due to the arrival at procreation age of the women born during the postwar population boom, whose greater number will more than make up for the lower fertility rate.

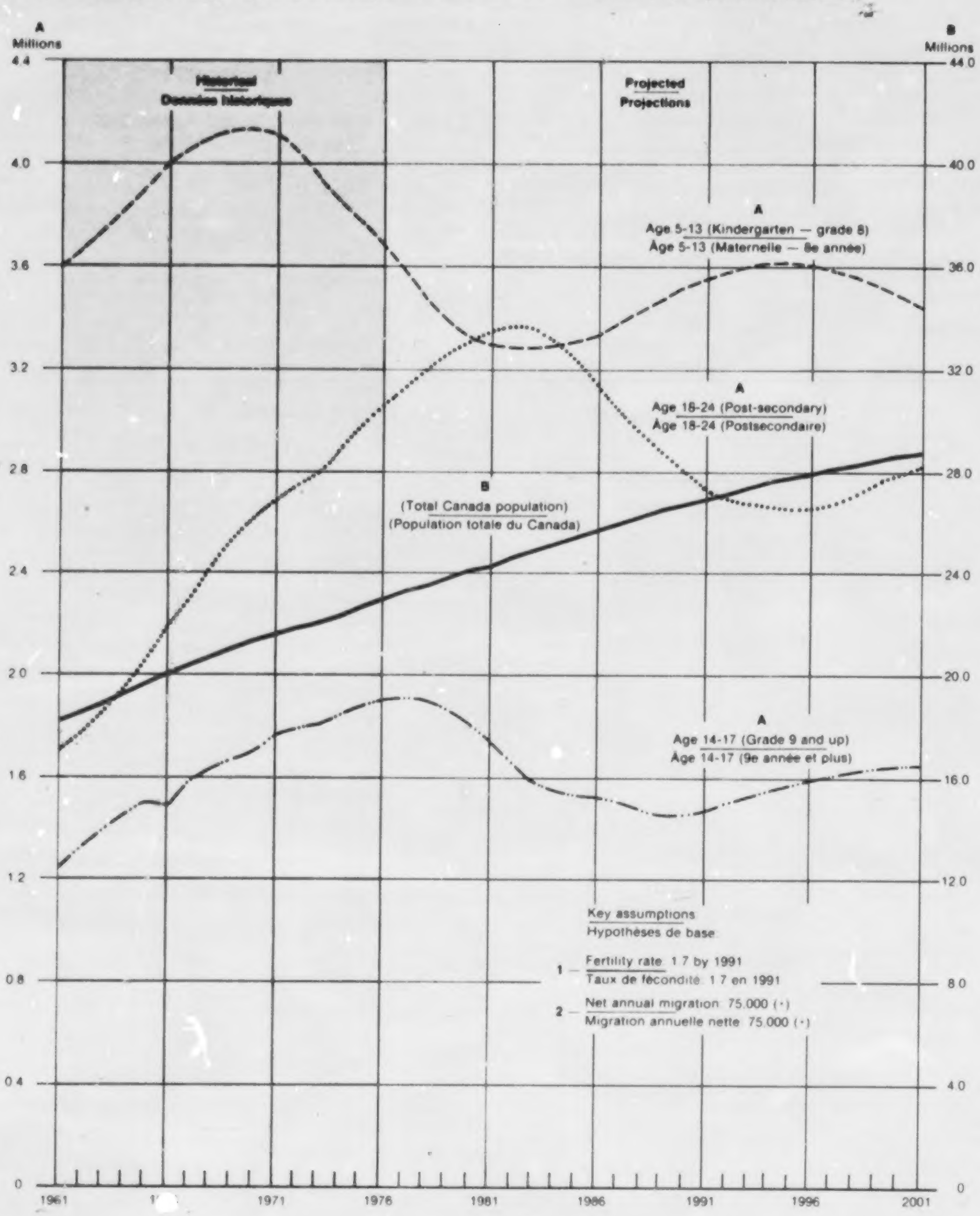
(2) The class of 2001 - The school-age population - Trends and implications : 1961 to 2001, by W. Clark, M.S. Devereaux, Z. Zsigmond, February 1979, Education, Science and Culture Division Statistics, Ottawa, Canada.

(3) Demographic Trends 1950-1990, OECD, Paris, forthcoming.

School enrolments for the various levels and types of education also depend on the progress of students : repeating and promotion rates from one class to the next, transition rate between one stream or one level and another, migration and movements between the public and private sectors - factors mentioned, in particular, by England and Wales, Canada, France and Australia which, in its reply, states that in 1976 between the 11th and 12th year of school the survival rate has fallen in several States. Secondly, in the case of non-compulsory secondary education (considering that almost the whole population of compulsory school age is in fact at school), school enrolments reflect the trend of social demand and therefore of participation rates. Of the countries which isolated this factor (many countries provided only global forecasts of enrolments without mentioning the respective shares due to the population trend and to the demand for education), mention may be made of England and Wales, which predict a less rapid increase in the proportion of pupils remaining in education after compulsory schooling than the rise observed during the sixties or the early seventies; Denmark, which forecasts that the proportion of an age-group going into the second cycle secondary level should rise from 33 per cent in 1975 to 40-45 per cent in 1990, and Japan, which expects the rise in enrolment rates in the same cycle to continue. Canada estimates the survival rate in secondary education at less than 90 per cent. France, for its part, mentions the possible influence of the economic situation on the post-compulsory enrolment rate, but makes no assumptions in this connection.

Selected Age Group Population of Relevance to School Enrolment, for Canada, Projection 3, 1961-2001

Population par groupe d'âges spécifique correspondant aux effectifs scolaires, Canada, Projection 3, 1961-2001



Key assumptions
Hypothèses de base

1 — Fertility rate: 1.7 by 1991
Taux de fécondité: 1.7 en 1991

2 — Net annual migration: 75,000 (+)
Migration annuelle nette: 75,000 (+)

(2) Pupil/teacher ratio

The second important factor influencing teacher demand is the number of pupils per teacher or per class. In most countries, this tended to fall during the last decade with a consequent rise in costs per pupil. In view of the economic situation, certain countries such as England and Wales, Italy and Sweden do not envisage a continuation of this trend in the future and have retained for their forecasts the same rates as those observed around 1975. The United States predicts a slower reduction in this ratio than in the past and even an increase in certain school districts, for financial reasons and also because it is not certain - according to certain studies (1)- that a reduction in the number of pupils per teacher or per class necessarily entails an improvement in pupil performance, although it brings an immediate improvement in teachers' working conditions. In other countries, the number of pupils per teacher should continue to fall, especially in Germany, where between 1975 and 1985 it should drop from 33-30 to 23-19 in primary schools, from 22-21 to 20-18 in first-cycle secondary schools, from 14 to 14-12 in the full-time second cycle, from 17 to 13 in the part-time second cycle and from 14 to 11 in special schools; in Australia, where on the most favourable assumption, it should be 17 in 1986 in the primary schools, instead of over 21 in 1976, and in secondary schools will fall from over 13 to under 12. Canada points out in its reply that an apparent improvement in the pupil/teacher ratio may be due to the fact that a fall in pupil enrolments does not necessarily entail a reduction in the non-teaching staff needed for the efficient operation of the system's infrastructure, nor a reduction in the number of classes per year of schooling. England and Wales and France refer to the difficulty of predicting the trend of this ratio, which depends both on the increase in enrolments and the financial resources available to education.

(3) Other qualitative changes

Relatively few replies refer - at least explicity - to other qualitative changes which might modify teacher demand. Of those which have done so, most relate these changes to the reduction in the pupil/teacher ratio which, in Germany, for example, should improve teachers' working load thus releasing them for other duties (Denmark also allows for a change in use of teachers' time), and should promote more differentiated teaching in order to overcome inequalities and enable new styles of teaching to be experimented with. In Denmark, the reduction in the number of pupils per teacher in primary and 1st-cycle secondary education should not affect pupils in "ordinary" schools but should, on the other hand, benefit those who need remedial education. Along the same lines, the case of Sweden may also be mentioned : schools with special problems - particularly 1st-cycle secondary schools situated in urban areas or those with a high proportion of immigrants' children - receive additional resources enabling them to recruit more staff of varying categories, especially teachers.

---

(1) This subject is also discussed in a general way in :"Class size as a factor of pupil performance - a policy analysis", by D. Pidgeon in New patterns of Teacher Education and Tasks - General Analysis, OECD, Paris, 1974.

Another improvement, mentioned by some countries, concerns teachers' qualifications; for example, in Denmark, the proportion of university graduate teachers in 2nd cycle secondary education should rise from 83 per cent in 1975 to 95 per cent in 1990 and the number of graduate replacement-teachers in primary and 1st cycle secondary schools from 50 in 1974 to 2,000 in 1980. In France, although the auxiliary staff are being phased out, it still raises some problems - both in primary schools and in the various types of secondary schools. It is therefore expected that, in addition to the measures of tenure with or without prior training courses, there will be an increase in the reception capacity of certain teacher training colleges (particularly those for primary teachers and for technical college teachers) in order to avoid any future need for recourse to auxiliary staff.

Among the measures which affect teacher demand but which have not been taken into account in the forecasts, Germany mentions the introduction of the full school day (morning and afternoon), the creation or expansion of "educational counselling" activities, and the replacement in the last three "Gymnasium" years of class teaching by subject group. In France, if, as planned, manual and technical education is introduced into 1st cycle secondary schools, 3,400 additional teachers will have to be recruited, including 1,600 tenured replacement-teachers to enable serving teachers to receive further training.

As a general rule, countries do not foresee - or have not taken into account - any changes in teachers' service obligations which might, as mentioned by France, thus allow them to absorb some of the surplus and take a more active part as instructors in the continuing education sector, nor do they mention any change in pupils' school attendance hours.

(4) In-service training for teachers

Few countries have estimated the additional teacher demand resulting from the establishment of a system of in-service training for teachers, even if they have mentioned it as one of the factors to be taken into account. In England and Wales, the Government's present expenditure plans envisage rapidly increasing provision for in-service training and for induction arrangements for new teachers : the projections are on the basis that the number of full-time equivalent teachers released for these programmes will rise from 7,000 in 1978 to 18,500 in 1981. In France, one of the priorities in the VIIth Plan is to introduce a continuing training system which will enable every primary teacher to avail himself of the full year of in-service training he is entitled to during his working life. This right is not extended for the moment to secondary teachers (it would entail the creation of 7,000 tenured replacement-teacher posts).

To conclude this section on the factors affecting teacher demand, it does not seem, according to the replies, that the reduction in such demand due to the falling birth-rate and hence fewer school enrolments can offset the needs created by the qualitative measures intended to improve the educational system. Such measures are, moreover, hampered by an unfavourable economic situation which is responsible for the slowing down or even reduction of public expenditure.

IV - FACTORS AFFECTING TEACHER SUPPLY

Teacher supply has two main components : internal supply, i.e. teachers already in service and still there at a given date, which therefore depends on departures, and external supply comprising persons with the required qualifications, who wish to enter or re-enter the system (1).

(1) Departures

Departures may be subdivided into retirement (and death) and departures for other reasons, a distinction which is not always explicit in country replies and will only be considered here when possible.

Forecasts of departures due to retirement and death are certainly the easiest factor to calculate, both as regards supply and demand, since they are based on an analysis of the age pyramid of people already born. On the other hand, departures for other reasons, which may include departures to other occupations from personal inclination or because the person is unable or refuses to take a post in a particular area or environment, departures of mothers wishing to bring up their children, and educational leave, are one of the most unpredictable elements of supply. They depend both on the economic situation (during a recession, teachers tend to remain in teaching and are more willing to accept a post offered to them, wherever it may be located, but are more apt to leave if the general situation on the labour market is favourable), on social conditions (particularly on women's work and hence on child-care facilities), and, in some cases on administrative decisions concerning such matters as types of leave (e.g. maternity leave) granted on the appointment of a teacher to a particular school more or less distant from his or her home and/or place of work of his or her spouse or in little sought after areas. Furthermore, the number of such departures may change sharply from one year to the next and affect the various categories of teachers differently, whether as regards age, sex, qualifications or the subject or subjects taught. Repercussions on supply are therefore both immediate and difficult to predict.

---

(1) France draws attention in its reply to two points which had not been clarified in the guidelines given by the Secretariat. First a distinction should be made in the total post creations financed out of the State budget between real creations of posts open to outside recruitment and virtual creations of posts corresponding to those financed previously from other resources or intended, for example, for tenure for auxiliaries already employed. Secondly, the concept of external supply should be understood not only in the strict sense, as defined here, but also in the broad sense in other words covering all applicants for a teaching post. It must be remembered, however, that in France there is a great variety of secondary teacher categories and of related training courses, which means that many people apply to take more than one recruitment examination or are already in teaching.

The replies which explicitly discussed this factor indicate, first, that there are large differences in total departure rates - ranging from 4 per cent per year in Finland to 11 per cent for primary teachers and 12 per cent for secondary teachers in Australia (the other countries are between these two figures). Secondly, in certain countries there is a tendency towards a reduction in this rate (1) and therefore towards an increase in the proportion of teachers remaining in service, thus restricting by the same number the posts offered to persons wishing to enter or re-enter the profession. For example, if the reduction in the number of departures observed in England and Wales since 1969 for most age-groups and teacher categories were to continue, the total departure rate would fall from 9.5 per cent in 1972 to perhaps 5.3 per cent by 1985, and even if these individual rates were to resume the 1972 level, the total rate would still fall and would be about 8 per cent by 1985.

In Canada, it is expected that the departure rate for elementary school teachers, which was about 10 per cent in 1974, will fall steadily to 7.5 per cent by 1990; in secondary education this rate is lower around 5 per cent - and should not change appreciably. As this country gives a breakdown by causes of departure, it may be interesting to note that at elementary level in particular the falling departure rate is due mainly to the reduction in the number of teachers who leave teaching to enrol in teacher training colleges, universities or other higher educational institutions or to resume their household duties or get married. The United States, for its part, attributes the falling departure rate (8 per cent in 1968, 6 per cent currently) to the slacker labour market for university graduates in occupations other than teaching, the reduction in the number of children per family and therefore in the number of women leaving teaching in order to bring up their children and a smaller demand from teachers for educational leave for fear of losing their jobs.

(2) Re-entries and transfers

This is another supply factor which is difficult to predict but which may be much more easily influenced than departures and can, in particular, compensate for them since it represents an immediate source of recruitment and allows for some adjustment of supply to demand.

Few countries have taken this into account in their forecasts and most of those which have done so have taken the rates observed in recent years. In England and Wales, it has been noted that the number of re-entrants is to a large extent dependent upon the number of teachers who left the profession in the previous year, and thus it is expected that, with a reduction in the wastage rate, the potential number of re-entrant from last year's leavers will diminish. However, since England and Wales is entering a period of teacher unemployment the number of potential re-entrants is likely to increase for those who might have obtained posts quickly in more favourable times will be caused to defer their re-entry, thus swelling the number of potential re-entrants. In Australia, where re-entries include teachers from other States or from overseas (apart from planned recruitment) who, while they do not greatly affect the supply and demand situation in Australia as a whole, have a much more appreciable impact at the level of the various States and on the demand, it is predicted that until 1981 re-entries will account for roughly the same proportion of the stock of teachers as was estimated for 1977, i.e. some 6.7 per cent in primary school, and for about 8.5 per cent in secondary schools. After this date these proportions should decrease, accounting for 6.3 per cent in primary and 6.9 per cent in secondary owing to the decline in teacher departure rates at the end of the seventies. It is difficult, looking at the information contained in the other replies, to determine how far these two countries are representative of the entire OECD, but one is bound to be struck in their case by the large number of re-entries as compared with departures (between one-third and one-half in England and Wales). In Australia the net loss rate (departures minus re-entries) averages about 4 per cent of the stock of primary teachers and 3.5 per cent of secondary teachers per annum - however these are expected to rise to some 5 per cent in the early 1980s. If the downward trend of departure rates continues the demand for teachers for the lower school enrolments forecast could, in theory, be largely met by re-entrants. In practice, however, new entrants are needed in order to preserve a balance of ages in the profession and to ensure the viability of the training plant at a level capable of expansion to cater for the increased enrolments expected in the late 1980s in some countries.

---

(1) Due in particular to the predominance of young teachers and therefore to a relatively low rate of departures due to retirement and death.

(3) New entries

New entries - i.e. new graduates qualified for teaching - have traditionally been the most important element in teacher supply; it is also the one which may be most influenced both by government decisions and by students' personal choice to engage in a particular line of study. However, a sharp distinction must be made in certain countries between primary and secondary school teachers. The former are in almost every case trained in special establishments exclusively for the teaching profession, which entails great rigidity in their employment but makes it relatively easy to apply measures to regulate the flow. On the other hand, while secondary teacher training has the same characteristics in certain countries (e.g. France, Belgium) as primary teacher training, in others it is provided in universities, polytechnics and special establishments (e.g. Australia) or only at the university. It may then be given in special departments or faculties (Germany) or in the ordinary faculties - generally, but not always exclusively, the science and arts faculties (Denmark) - and may or may not be followed by a professional training. The extreme situation is that prevailing in Italy, where possession of a university degree from any faculty whatsoever constitutes a sufficient qualification to teach in both the first and secondary cycles, or Japan, where a great many students with a first degree take the secondary teaching certificate, but without necessarily intending to teach. The fewer the ties between training and the profession, the more difficult it is to influence supply, which then depends only on students' choice of a particular line of study and their knowledge of the openings to which it leads.

The supply of new entries is fully discussed, unlike most other factors, in the majority of replies. The following are a few examples of the forecasts from these replies:

- Germany expects the number of new graduates applying for a teaching post to rise because of the increase both in the relevant age group and in the individual demand for higher education, accompanied by a fall in private industry's demand for highly qualified personnel.

- England and Wales consider that, in order to avoid a significant over-supply of newly qualified teachers, it is necessary to reduce the size of the teacher training system (outside the universities) from 114,000 places in 1971 to some 45,000 by 1981:

  (a) Admissions to undergraduate initial training (not requiring possession of a first degree) have been planned to fall from 30,000 in 1975 to 20,000 in 1976, and 12,000 in 1977. The intake for 1978 and succeeding years has not yet been determined but is likely to be of the order of 9-10,000;

  (b) The proportion of students mentioned under (a) taking a fourth year of study should rise from the present 20 per cent to 50 per cent in the early 1980s;

  (c) The number of first-degree holders accepted for post-graduate initial training is expected to remain at about 5,000 (excluding the 5,000 students in the University Departments of Education);

  (d) The remaining 10,000 places - out of the total of 45,000 - would be reserved for training activities for teachers in their induction year and for in-service training.

- Australia bases its forecasts of new teachers on the number of places to be offered in the University Departments of Education, allowing for a 10 per cent drop out rate on completion of training, and also on the number of students beginning teacher training in the Colleges of Advanced Education (CAEs). The assumptions concerning dropout and participation rates are as follows: 7.5 per cent of the students taking a four-year course and 80 per cent of those on three-year courses will ultimately seek to go into teaching, together with 95 per cent of those taking a one-year post-graduate course. Courses are assumed to be completed in minimum time.

- In Denmark, the assumption was that the proportion of newly certified teachers from the training colleges going into State primary and first-cycle secondary schools should remain the same as that recorded in 1973, but that the number of new entries to these establishments should fall by 800 in 1975 and then by 250 in each of the three following years. On the other hand, since second-cycle secondary teachers are recruited from among graduates of Arts and Science Faculties, it is difficult to make forecasts for the teaching sector alone. It may be noted, however, that at present slightly less than half of these graduates find jobs in teaching and although the total number of students beginning arts and science studies should fall by 10 per cent as from 1975, the same proportion of graduates cannot be employed in the education sector.

- The United States also mentions the increasing size of the age group going on to higher education (which will nevertheless begin to diminish around 1979) and the rise in individual demand, which has the effect of increasing the number of university graduates, some 22.5 per cent of whom want to go into teaching.

- In Finland, the number of students accepted by the teacher training establishments is based on quotas approved by the Ministry of Education. It is estimated that 93 per cent of them will find a teaching post.

- In Italy the trend over the last few years has been used as a basis for forecasting the number of graduates from primary teacher training colleges between 1974 and 1980, and for forecasting the total number of university graduates, from whom secondary teachers are recruited.

- In France, the present capacity of the primary teacher training colleges is not sufficient to train the number of teachers required. Considering that 88 per cent of trainees take a teaching job when they leave college, the number of pupil-teacher places should be increased from 14,500 in 1975 to 26,500 in 1978. It should be noted, however, that after 1980 the fall in enrolments will appreciably affect the five primary school years and therefore teacher requirements. In view of the great variety of secondary teacher categories and of the related types of training, it is very difficult to predict the trend of total supply for this level. Moreover, as secondary teachers are generally recruited by competitive examination, it is probably more useful to regard the candidates as the supply rather than those who have passed the examination and completed their teacher training. It must nevertheless be borne in mind that any one person can take several examinations and that a large number of applicants are already teaching - as established or auxiliary staff. It may then be noted that the admission rate for the IPES (Instituts de préparation aux enseignements de second degré - recruiting prospective teachers by competitive examination; students are paid a pre-salary during their studies and sign a commitment to teach for ten years dating from their entry to the Institut) has fallen sharply (arts: 30 per cent in 1967, 21 per cent in 1972 and 15 per cent in 1975; science: 37 per cent in 1972 and 16 per cent in 1975), whereas the number of applicants has remained steady in arts since 1972 and increased in science. The number of applications and the admission rate (10.9 per cent) for the theoretical part of the CAPES (1) remained the same in 1973 and 1974. The number of candidates for the Agrégation rose by 22 per cent in 1972 and 9 per cent in 1973 and then fell by 2 per cent in 1974, while the success rate did not vary between 1973 and 1974 (10.2 per cent). Finally the number of first and masters degrees in Arts and Science, the great majority of whose holders may be regarded as the potential teacher supply for the future, varied very little between 1973 and 1974 and therefore seems ill-adjusted to the foreseeable trend of requirements. On the other hand, in the short 2nd cycle (colleges of technical education), the expansion of the ENNA (Ecoles normales nationales d'apprentissage) should make it possible to reduce the variety of teacher categories, to improve their training and to phase out the particularly high number of auxiliary staff at this level.

- In Japan, the primary teacher supply is not sufficient to cope with the increase in the number of pupils since 1974 and the expected reduction in the pupil/teacher ratio, especially in the larger cities and their suburbs, where the population is increasing rapidly. Furthermore, there are many auxiliaries who do not have the requisite qualifications. The situation at secondary level is quite different: in 1975, 7,000 of the 89,000 graduates who passed the teaching certificate for the first cycle and 6,000 of the 72,000 who passed it for the second cycle obtained a teaching post. It is therefore difficult in this country, where as already mentioned, a great many university graduates take the teaching certificate without really intending to teach, to predict the real teacher supply with any accuracy.

- In New Zealand, the number of primary teachers re-entering the profession is tending to rise, while pupil enrolments are falling. In view of this, the supply of new teachers tends to be greater than demand. This problem has not yet reached secondary level.

V - POSSIBLE IMBALANCES BETWEEN TEACHER SUPPLY AND DEMAND AND THEIR REPERCUSSIONS ON EMPLOYMENT

Both the preceding country' tables and the analysis of teacher supply and demand show that, while some countries still suffer from a general shortage of teachers, or from shortages of specific kinds of teacher, most OECD countries are already faced or will be in the future with a surplus affecting the different levels of education one after the other. But it should be noted that overall surpluses may be accompanied by shortages in particular regions - frequently due to teachers' lack of geographical mobility - and/or in particular disciplines or pupil categories (especially handicapped children, those requiring various types of special or remedial tuition, and those belonging to ethnic minorities for whom teachers speaking the same language cannot easily be found). It is in fact very difficult to judge from the bare aggregates what the position may be in some individual region or for certain pupil categories. Most country replies however refer to the problems of teacher surpluses. While a majority only state them in general terms, some have been able to provide quantitative data regarding the extent of the imbalance and the forms it takes.

---

(1) Certificat d'aptitude au professorat de l'enseignement de second degré - competitive examination open to people in possession of a "licence d'enseignement". Students who have passed the theoretical part do one year's teaching practice with pay under the authority of educational counsellors in a Centre Pédagogique Régional, after which they take the practical examination.

Germany expects primary teacher supply and demand to balance shortly after 1975, and this will soon be followed by rapidly increasing surplus. The situation in first-cycle secondary education will follow the same pattern but slightly later: balance between 1976 and 1978, followed by a surplus. In the second cycle of secondary education, on the other hand, shortages will continue to exist up to 1982 in general education and beyond 1985 in technical education. For the system as a whole, the shortage observed during the first half of the '70s will be followed, after a short period of equilibrium, by a surplus affecting between 100,000 and 160,000 teachers in 1985; in other words, by that time, about one qualified teacher in six will not be able to find a full-time post in teaching. Already, during the second half of 1975, 2,400 teachers were unemployed, i.e. five times more than two years previously. Although the teacher unemployment rate is at present very much lower than the rate for the labour force as a whole (0.5 per cent, as against 4 per cent), it may well overtake it very soon. It should also be noted that surpluses may, for budgetary reasons, make their appearance more quickly in the Länder - which are autonomous in the educational field - than would seem likely from calculations made for the Federal Republic as a whole, and, secondly, that, side by side with these general surpluses, shortages persist for certain disciplines, although their number is falling.

In England and Wales, successive public expenditure cuts, which have led to a policy of maintaining and not reducing staffing ratios, have made it difficult both for newly qualified teachers and those wishing to re-enter the profession to find teaching posts. The situation is likely to deteriorate still further for the next four years and is unlikely to show any marked improvement until 1981, when the Government's recent decision to limit the number of non-university teacher training places to 45,000 will begin to affect the output of newly qualified teachers.

In Australia, unless significant policy initiatives are taken in the near future, primary teacher surpluses will be relatively small in the next few years, but are forecast to increase rapidly from 1980 and equal 15 per cent of demand towards the mid-80s. Secondary teacher surpluses are likely to increase more rapidly during the last few years of the 1970s and could equate by the early 1980s to some 25 per cent of the estimated demand. Here again, the general surpluses conceal possible shortages in particular regions and/or particular disciplines.

In Belgium, and for the French sector only - but the situation may be regarded as identical in the Flemish sector - about 100 nursery school teachers and nearly 1,000 primary teachers are now redundant and recorded as such in the Ministry of Education budget. The situation is expected to deteriorate in the future and to entail unemployment and more particularly under-employment for higher education graduates.

Canada expects the number of diplomas, certificates and degrees awarded in 1977-78 to be nearly 80 per cent higher than the projected demand for elementary and secondary school teachers. It is estimated that the number of professional staff (teaching or non-teaching) needed for the secondary level will diminish by 25 per cent between 1976 and 1989. However, it is pointed out that only the Faculties of Education provide tuition geared to an understanding of child development, personality growth, individual differences and the teaching-learning processes, whose applications are just as important in the home and in many occupations as they are in the classroom. In view of this, teacher training should be regarded in a much broader framework than as a simple preparation for teaching and should not depend only on the latter's requirements.

Denmark also expects a surplus among primary and first-cycle secondary teachers with the concomitant risk of unemployment, which is all the more difficult to eliminate since these teachers are trained exclusively for teaching and have little chance of finding jobs in other sectors. At the same time, the proportion of arts/science graduates finding a post in second-cycle secondary education should diminish.

Although none of the studies begun in the United States on the forms taken by the imbalance between teacher supply and demand has been completed, there is every indication that this imbalance is appearing in the form of some unemployment among both experienced and inexperienced teachers and in the search for employment outside teaching.

According to surveys carried out in Sweden on the trend of the teacher employment situation, the number of vacancies and of posts held by unqualified teachers (which have to be posted up as vacant every half-year) is falling in primary education and in the theoretical sector of secondary education - indicating that supply is increasing. However, the number of vacancies and such posts is tending to rise in vocational and special subjects and in special education - thus revealing the persistence of shortages. At the same time, the number of teachers who had not obtained a full-time post a week after the beginning of term did not vary significantly between Spring 1974 and Spring 1976. However, Sweden mentions that these tendencies are more an indication of employment market trends than of its real situation at a given moment and that there is every reason to believe that a relatively large number of teachers are under-employed or unemployed, especially in regions where there are training colleges. At the same time however certain shortages persist.

VI - MEASURES TO REGULATE TEACHER SUPPLY AND DEMAND

Most of the measures envisaged by countries to meet their present or future surplus situation are fairly traditional at least, judging by the replies to the questionnaire. Economic reasons due to present conjunctural trends explain this attitude, but one might have thought that this state of affairs, which clearly has some positive features for education, might have provided an opportunity for reviewing the roles of the various educational staffs - and their training - in the educational system and especially in its relations with the community.

- Measures relating to demand

Some of these measures were mentioned in Section III of this report, concerning the factors affecting teacher demand. They will only be briefly recapitulated here. They include the improvement of pupil/teacher ratios envisaged by such countries as Germany, Australia, Denmark and Japan (in spite of the teacher shortage still being experienced at primary level).

Certain countries (England and Wales, Denmark, Japan) also mention the rise in enrolment rates. They appear to be more a consequence of social demand than the result of a policy to persuade young people to remain in education after compulsory schooling and, in particular, to provide them with an adequate vocational training to help them find a job without too much difficulty.

Another means of increasing teacher demand and using vacant school accommodation is to increase enrolments in certain relatively undeveloped types of education, particularly pre-primary education, special education, remedial classes (mentioned by Belgium) and adult education. However, if this is to help to absorb surpluses, then some way must be found of using at least part of the surplus primary and secondary teachers in these other types of education - usually after a period of retraining. The problem is the same when a shortage in a certain type of education (e.g. vocational or technical) or in certain subjects has to be made up by using a surplus from another type (usually general) or in other subjects, or else when redeploying some teachers to other tasks within the educational system (administration, inspection, guidance, educational counselling, etc.). Australia, France and Finland are considering takins measures along these lines, but this raises the problem of the internal mobility of teachers and, indirectly, of their training.

Generalised measures of continuing training for teachers such as those taken by England and Wales and by France, are essential if teachers are to be able to adapt to changes in knowledge and in the educational system. They are all the more essential because the annual decline in new entries and departures means that the average age of teachers should rise, as should their length of service in the same establishment. In a report by the Council of Ontario Universities (Canada) (1), it is also pointed out that the number of administrator posts to which certain teachers - among the best - went in the past should diminish and that classroom teaching would become the general rule and should be regarded as a terminal position. At the same time, in view of budgetary reductions, the number of supervisors, tutors or consultants from whom the teacher could obtain help will fall, leaving him alone to face the development, implementation and evaluation of new curricula. A wide variety of in-service training activities is therefore all the more necessary. Such measures have repercussions on demand since teachers in "continuing training" leave free, each year, a number of posts which can be taken temporarily by other teachers. Certain countries (France, Sweden) are in favour of creating a permanent body of established replacement teachers who could be called on whenever a teacher has to be away for any reason : sickness, maternity or educational leave, for example, or in order to compensate for sectoral or regional imbalances.

In a surplus situation, measures might be taken to raise the qualifications required for teaching - and therefore the quality of the teaching. The United States mention that many Americans feel that teacher training should no longer be at undergraduate level but that all students wishing to enter the teaching profession should (i) already be in possession of a first university degree and (ii) that they should prepare for their professional diploma in two or three years of teaching practice. Similarly, England and Wales state that the reduction in pupil enrolments should make it possible to improve the level of teacher education without much need for additional resources, and it is expected that the number of trainee teachers taking a fourth year of study will increase. The phasing out of non-graduate teacher training courses in favour of a degree course is also being considered. Although Japan has a shortage rather than a surplus of primary teachers, the introduction of a qualifying examination for these teachers and the creation of post-graduate teacher training schools within the universities, which will also train primary teachers are being considered.

---

(1) "Realignment of priorities for teacher education : A status report on the Ontario Faculties of Education", Council of Ontario Universities, January, 1978.

Restrictive measures relating to demand include the closing down of small schools, as in certain school districts in the United States and Belgium. However, apart from the effects that such closing down may have on local community life as a whole, it does not necessarily lead to savings if, as in Belgium, redundant staff are still fully paid. The reductions in costs per pupil resulting from a change in teachers' service obligations, whether increased for the same salary or reduced for a smaller salary, meet with strong resistance from the trade unions, at least in the United States, which is the only country to have mentioned this in its reply. There is every reason to believe that the situation is the same in the other countries.

Another possibility of reducing educational expenditure would be to make better use of school premises, either for community purposes such as health or social services (referred to by the United States) or by extending the range of activities offered by the school - other than education proper - to pupils and adolescents not at school, to parents and in general to all members of the community. Responsibility for some of these activities could then be taken over by the teachers, who would organise them and thus find other opportunities for employment and broadening their tasks.

Countries did not mention this last point in their replies; nor did they in calculating demand, take account - at least explicitly - of the changes in teacher roles and tasks nor of the use of staff other than teachers and/or of various media. Similarly, no reference was made to possible changes in pupils' timetables and activities which might lead to very different and more varied groupings than the traditional class (1). Although these changes are purely qualitative, it would have been very interesting to discover their implications in terms of teacher requirements and costs.

Lastly, as demonstrated in a report (2) presented at the 35th session of the International Conference on Education, which was held from 27th August to 4th September 1975 in Geneva under the auspices of the International Bureau of Education, the teacher requirements of the developing countries will increase between now and 1985 much more quickly than those of the developed countries. The developing countries' own resources are not sufficient to meet these requirements. The surplus situation prevailing in a number of developed countries might allow them to consider sending more of their qualified manpower, especially teaching staff, to these countries in the general framework of national or international assistance programmes.

- Measures relating to supply

The measures relating to supply mentioned most often - when they are not the only ones - in replies to the questionnaire are those whose aim is to modify the number of new entries to teacher training establishments and to the profession. They may be of two kinds, unequal in scope but complementary: authoritarian decisions by governments to reduce the reception capacity of training establishments and/or post creation, or voluntary decisions by students to take courses of study other than those leading to teaching. Several countries say that a large scale information campaign should be launched among students in order to give them a good knowledge of the employment market - which, incidentally, is valid for all occupations and their related studies and not only for teaching. However, such self-regulation by students may lead to a reduction in resources for teacher training establishments or programmes, which in their turn are obliged to reduce the number of places and the number of teacher training posts. In the United States, for example, some of these establishments prefer to use a larger number of unestablished part-time staff, which is cheaper, but these are isolated cases rather than a general tendency.

---

(1) For further details concerning these various points, see Annex II of "Analysis of teacher tasks in selected innovative schools" (Part Four of this volume) and "Teacher policies at the level of compulsory education - A clarifying report" (Part Three of this volume).

(2) "Projections of teacher requirements in 1985 : a world and continental statistical analysis", ED/BIE/Confinted, 35/REF.1.

Another way of dissuading students from choosing studies leading to teaching is to link training less closely with recruitment. In certain countries, every qualified teacher has the right to a teaching post; if no post is vacant, he is taken on as a supernumerary with or without a posting and is paid a full salary. Measures to remedy this state of affairs have been taken in New Zealand in the case of primary teachers. Hitherto, graduates of teacher training colleges were appointed after their first year of teaching (regarded as an integral part of their training and followed by the award of a teaching certificate) to a two-year assignment generally in isolated districts where there was a shortage of teachers. It was only at the end of this period that they could apply for a permanent post in a school of their choice. In view of the increasing number of teachers re-entering the profession and the fall in school enrolments, it was decided that as from 1977 posts will be reserved in all schools for new teachers, who can apply for permanent posts as soon as they obtain their teaching certificate; however, if they cannot find a post, they are not given any special assistance. Finally, the rights of serving teachers should be strengthened as compared with those of teachers wishing to re-enter the system, although the latter can appeal if no post is offered them.

A problem closely connected with the above is that of the pre-salary - or any other type of special benefit - granted in certain countries to student teachers, who must in return teach for a period which varies from country to country (for a number of years equivalent to the length of teacher taining in New Zealand; between five and ten years according to teacher categories in France, for example). This practice was introduced during a period of shortage and is perhaps not quite so meaningful in a surplus situation (1). However, it should be remembered that the teaching profession is traditionally a privileged means of social promotion. Abolition of the pre-salary, which enables young people to pursue higher studies who could not otherwise do so, might run counter to a policy of equal opportunity at this level of education. But this issue extends beyond teacher training and concerns the whole problem of student assistance in general.

---

(1) Furthermore, the savings made by abolishing the pre-salary might in certain circumstances permit a by no means negligible increase in the salaries of serving teachers. For example, a survey carried out by Gerald Burke, "The economics of bonded service - The case of graduate secondary teachers in Victoria, Australia", shows that, considering the low survival rate in the teaching profession after the compulsory period (in secondary education, less than 40 per cent of the men and less than 20 per cent of the women have more than 10 years' experience), the abolition of the pre-salary would make it possible to increase salaries of serving teachers by 25 per cent for a beginner and by 10 per cent for a head teacher, and, in the case of science teachers (men) to offer 50 per cent higher salaries than those paid to science graduates in other professions. The sums thus saved may of course be used for other purposes such as a general student assistance scheme.

Most countries refer to the decisions taken by the responsible authorities (central government or State governments) to reduce the number of places in teacher training establishments or the number of programmes but do not draw any conclusions from this about guidance for those students who are constrained to choose another branch of study, nor concerning the employment of teachers from these establishments whose posts are suppressed. This problem is important not only for the primary teacher training colleges, which by their very nature lead only to teaching, but also for certain university faculties (arts and science more especially), one of whose functions, and very often the most important, was the training of secondary teachers; a training which might or might not be followed by a period of professional training. Very often, in the present state of affairs, a degree from these faculties provides few other outlets or leads to occupations that are ill-defined or already overcrowded. More general measures should be taken to avoid unemployment among teachers and other categories of qualified personnel. Moreover, close adjustment of teacher supply to present requirements might mean that in the longer term it will be impossible to respond quickly to an increase in these requirements. Consequently instead of trying to solve the problem of teacher surpluses in isolation and rapidly, it should be set in the broader context of higher education as a whole, the structure, place and function of which should be entirely reviewed.

This is apparently the direction chosen in England and Wales, where steps have been taken to change the actual structure of the teacher training system and to reduce its monolithic nature by integrating it, wherever feasible, with other types of higher or further education. This allows sufficient flexibility for teacher training members to be adjusted to meet any reasonable upward or downward variations in supply and demand from those initially adopted. It has therefore been decided:

- first, to incorporate unit-based courses leading to the B.Ed. (first degree in education) in institutions providing courses for other first degrees (awarded after three or four years' study) and for the Dip.HE. (new degree-level course of only two years), which enables students to defer their commitment to a career and change direction if they wish;

- secondly, to set up a relatively small teacher training system which will not be under-utilised when the demand for new teachers is low but capable of adapting fairly rapidly to any foreseeable increase in that demand.

In order to achieve these targets and to bring teacher "production" down to the level needed to match demand, the Colleges of Education (teacher training establishments) are being completely reorganised:

- some of them will disappear or will be used for purposes other than teaching;
- a few will continue to train teachers only - initial training and in-service training;
- side by side with teacher training, many will provide new courses, either above or in association with other institutions, as Colleges of Higher Education, which may develop along the lines of the American "Liberal Arts Colleges";
- others will become teacher and professional centres;
- and a large number will be merged with Polytechnics or Further Education establishments and sometimes with universities.

Another problem which runs counter to the adjustment of supply to demand concerns the rigidity of the training given to teachers, which prevents any mobility between levels and types of education and between subjects. Yet most countries report shortages in certain sectors side by side with a general surplus. In Sweden, for example, there are no less than 7 categories of primary and secondary teachers (the number being probably higher in France) who have narrowly specialised for a specific level of education or a given group of subjects, sometimes even a single one. Some countries realise the need to lower the barriers between the different teacher categories and to make it more possible to move from one category to another. However, this has hardly been crystallised so far in measures to amend and align or more or less standardise the initial training of teachers and to generalise in-service training, including courses leading to subsequent specialisation. However, the case of Ontario (Canada) (1) may be mentioned where a decision is to be taken in 1978 regarding the replacement of the various elementary and secondary level teaching certificates by a single certificate issued after a basic core training which would be supplemented by subsequent in-service training to enable teachers to specialise in various subjects and areas (special education for gifted pupils, slow learners, reading instruction, etc.) or to change level. This could involve a redistribution of the existing financial resources with a reduction in those allotted to basic training and an increase in those allocated to in-service training.

---

(1) Report by the Council of Ontario Universities, op.cit.

Teacher supply may also be modified by influencing other components besides new entries; i.e. teachers in service. In England and Wales, the measures taken on behalf of local authority employees have been extended to teachers so that those aged 50 or older who lost their jobs through redundancy or in the interests of the employing authority's functions may receive compensation equal to the pension and lump sum payment to which they would be entitled on the basis of their service to the time of their departure. These payments may be enhanced, at the employer's discretion, by adding a number of extra years, but not more than ten, to the actual number of years of service. Other incentives for departure, which have not been considered in the countries' replies, might for example, concern longer maternity leave or leave to look after young children (applying to both the father and the mother) without loss of employment (extending to all workers, of course) or facilities for teachers who wish to do so to retrain for professions other than teaching.

VII - CONCLUSION

One of the problems often mentioned in country replies is the difficulty of making projections of teacher demand and especially of teacher supply owing to the many complex factors affecting teachers and the lack of information about them (1).

Data relating to demand (school-age population, enrolment rates, pupil/teacher ratios) are available and may generally be used as a basis for reliable projections. However, they frequently do not take account of staff other than teachers (administrators, specialists, etc.) nor of tasks other than teaching itself, any more than of changes in the organisation of educational activities, teachers' service obligations and pupils' school attendance hours. Furthermore, pupil/teacher ratios may be influenced by the level of resources allocated to education and by teachers' salary levels, which are difficult to predict with any certainty.

On the other hand, little is generally known about the different components of supply and supply forecasts are often based on hazardous assumptions. On the one hand, the number of students beginning teacher training is closely linked with the market conditions prevailing at the time of their choice and not with those which are going to exist three or four years later. The proportion of new graduates who want to go into teaching also depends on employment opportunities in the different sectors of the economy and not only in teaching. On the other hand, information is lacking about the number of qualified persons not in teaching (the teacher reserve) and the proportion of these who will be looking for a teaching post at a given date; moreover, this supply component itself depends on previous years' forecasts of the number of newly qualified people and of the proportion who will go into teaching. Consequently, if these numbers are over-estimated (or under-estimated), then so is the future potential reserve. Lastly, the proportion of teachers who will leave teaching depends not only on the composition of the teaching body (according to age, sex, category, qualifications, etc.), but also on other indirect factors: behaviour of married women (particularly important considering the high rate of female employment in this profession), fertility rate, more or less free choice of place of teaching, etc.

---

(1) Some of the points mentioned here are discussed in greater detail in a study prepared by the Rand Corporation for the United States Department of Health, Education and Welfare under the title "Analysis of the Educational Personnel System - VIII - The Market for Teachers", Stephan G. Carroll - R - 1344 - HEW, February 1974.

A perfect balance of teacher supply and demand - insofar as this is theoretically possible - does not seem desirable since, when all surpluses have been eliminated, the system's inertia will inevitably lead, after a brief period of equilibrium, to a shortage. The number of new teachers will continue to fall for a few years - the decision to take teacher training having been made during a period of surplus - and the teacher reserve, which will have been considerably depleted throughout the surplus period, will continue to diminish until the production of new teachers is sufficient to enable it to build up again, which will take a certain time.

Moreover, a general policy of reducing surpluses may improve the situation on sub-markets (type, level of education, discipline, region) where surpluses exist, but it may also cause the situation to deteriorate on sub-markets where there is a shortage. Finally, when there is a teacher surplus, it is possible to choose people whose capacity and abilities seem best adapted to pupils' needs. On the other hand, a shortage means recruiting a certain proportion of staff who do not have the formal qualifications required. This may lead to a deterioration in the quality of teaching which might be more serious for pupils from the poorer social classes; it is then often necessary to take expensive compensatory measures. It is not evident, therefore, that a certain teacher surplus costs society more than a shortage and its consequences.

More detailed studies should therefore be carried out on the various components of teacher supply and demand and on the factors influencing them. At the same time, since teacher supply must be able to respond to a demand which varies over time, countries should not try to establish a perfect balance, which is perhaps impossible to achieve, but should accept a certain permanent surplus and take advantage of it in order to improve the quality of teaching for the greater benefit of the pupils, the community and society as a whole. This can only be done if a certain number of prerequisites are fulfilled, especially as regards the training (initial and continuing) of teaching staff, which should be sufficiently flexible and polyvalent to permit:

(a) greater internal mobility between levels and types of education (including adult education) disciplines, and educational and related activities;

(b) possibilities of employment and maintenance of social status in sectors other than teaching; the potential reserve of teachers created in this way should enable any fluctuation in demand to be met.

Lastly, in view of the complexity of the problem and its possible policy implications, more information about all the factors involved would provide a sounder basis for concertation between the responsible authorities and the teachers' associations, especially with regard to measures concerning the training and utilisation of teaching staff.

VIII - POLICY IMPLICATIONS

The diagnosis of the present teacher supply and demand situation and its implications, **in Section I of this report, differs little from that made at the November** 1974 Intergovernmental Conference on Teacher Policies (1). This second analysis confirms the expected widening of the gap between supply and demand and the need to articulate teacher training more closely with other forms of higher education and with new training requirements for educational staff.

Improvement of basic data and decision-making structures

To begin with, it must be stressed, as the Secretariat already has done for the 1974 Conference, and even earlier in concluding its study on persistent teacher shortages (2), that more coherent policies adapted to the new needs of the educational systems depend:

(i) on improving the data on educational staff, either in the form of statistics or as a result of research and development studies on the teaching/learning processes and their relationships with the role of the school;

(ii) on a better articulation of the forecasting, decision-making and planning structures so that the policy-making, administrative and educational authorities responsible for the status, training, recruitment and utilisation of educational staff do not take uncoordinated and fragmentary decisions;

---

(1) In particular, see the Secretariat background report: "Recent trends in conditions for teacher recruitment and their implications in Member countries", in Teacher Policies - General report of the Conference , OECD, Paris, 1976.

(2) "Summary: The main trends and their policy implications", in Training, recruitment and utilisation of teachers in primary and secondary education , OECD, Paris, 1971.

(iii) on a greater effort to integrate quantitative and qualitative aspects in the analysis of supply and demand - especially in forecasting exercises - in order to make short-, medium- and long-term decisions more coherent.

In the long run, it would be very dangerous, both for the educational system itself and for society as a whole, if the actual characteristics of those accounting for 60 to 80 per cent of current educational expenditure were not sufficiently known and/or reliable, thus making the forecasts on which fundamental policy decisions are based even more uncertain. It would therefore appear desirable that exchanges between Member countries on this subject should continue and be intensified at international level.

Short-term measures

Although the short-term concept is not really compatible with a planned regulation of the flow of qualified teachers and candidates for the teaching profession, it should be noted that the increasing deterioration of the situation in many Member countries is due to a contraction of public expenditure because of slower economic growth. In certain Member countries, qualified teachers are or risk being unemployed as do teachers on the point of qualification. We have very little information on how the community cares for them. For example, the need for a probationary period of one or more years as a pre-requisite for permanent establishment may make it more difficult for those who have not completed this period to obtain unemployment benefits or to attend retraining courses at the community's expense. It would be advisable to check that unemployed qualified teachers do in fact benefit fully from the unemployment assistance legislation and that those completing their specialisation studies or in their probationary period receive suitable assistance - possibly combining financial aid with retraining - in the light of their educational attainments and on the basis of their contact with the world of youth. In an economic situation which tends towards a reduction in public expenditure and/or its partial transfer to sectors that society regards as more critical, efforts should be directed towards a better utilisation of the funds available for schools in general and everything connected with teacher training and recruitment.

In view of this, it is for discussion whether the following general principle could provide a useful basis for considering policy measures for the unemployed teachers: any payment of unemployment benefits which is not accompanied by a full-time retraining course could be made in exchange for a service obligation proportional to the benefits received. Depending on developments in the short-term situation, i.e. subsequent possibilities of staying in the teaching profession, the extent of this obligation might vary - or even disappear - and be replaced by a retraining course for other sectors of activity, based on the educational level and experience acquired.

In view of this, the value might be argued of adopting the following general principle as a basis for considering policy measures for unemployed teachers - a principle which could, of course, be applied to any other groups of unemployed : any payment of unemployment benefits which is not accompanied by a full-time retraining course could be made in exchange for a service obligation proportional to the benefits received. Depending on developments in the short-term situation, i.e. subsequent possibilities of staying in the teaching profession, the extent of this obligation might vary - or even disappear - and be replaced by a retraining course for other sectors of activity, based on the educational level and experience acquired.

In regard to other short-term measures the range is limited. For example any remaining legislation concerning the pre-recruitment of teachers would need to be reviewed, even though it sometimes provides one of the avenues of entry to the profession and constitutes an acquired right. It should thus be borne in mind that this type of measure, usually accompanied by a pre-salary or some other financial benefit, was introduced during a period of shortage and is very costly. On the other hand, the flexible, ad hoc use of such incentives might be continued (or even extended to certain Member countries which do not apply it) in order to reduce sectoral pockets where educational staff is short. In the present situation it may also be difficult to maintain, as some Member countries do, overtime for established staff - except as a standby to promote a school's flexible operation - or a large number of unqualified teachers. The fate of this latter category should naturally be given a great deal of thought insofar as, in the absence of any specific qualification, their position on the labour market may prove more vulnerable.

Finally, teacher utilisation should be reconsidered not only in the light of national requirements of different staff for all types of education and educational activities, whether formal or not, but also with regard to the requirements of other countries, especially the developing countries, in the context of bilateral or multilateral technical assistance.

Medium-term measures

Since in most countries sectoral shortages exist side by side with overall surpluses and since the surpluses do not affect all levels of education at the same time, an active policy of internal mobility should be promoted in order to facilitate transfers of teachers from one type or level of education to another and from one discipline to another, and to broaden the range of duties which they can carry out. As things stand at present, this can only be achieved through appropriate generalised measures of in-service training and retraining, which would also make it possible to offer posts to fully qualified replacement-teachers in the context of the redeployment and efficient utilisation of available staff. The decline in the demand for teachers thus provides an opportunity to develop a variety of in-service training activities. This might lead the responsible authorities to review the distribution of resources and places in training establishments between initial training and in-service training.

However, the very limits of such a policy should not be overlooked. The hierarchical division of the different categories of educational staff not only affects their status and pay, but also the content, methods and duration of initial training. It is not always possible [illegible] build rapidly into training additional in-depth content to meet the requirements of new functions or specialities.

In any event, this policy should be accompanied by a reorientation of the content of initial and in-service training, which can only be implemented over the longer term. It is not certain, in any case, that total mobility, which implies a very broad all-round training, can be achieved so long as types and levels of education are as different and compartmentalised as they are at present in most Member countries.

The elimination or reduction of teacher training programmes can have a regulating effect on supply in the medium-term but has certain disadvantages: first, for unsuccessful applicants who are obliged to turn to other studies; next for teacher training instructors, who may find themselves unemployed; and, lastly, if any general or sectoral rise in demand (for demographic, economic or other reasons) has to be met.

This means that while a policy of limiting the number of places in the various teacher training institutions may soon be necessary, it should be accompanied by certain support measures. These should include extensive information concerning outlets in this sector, which only a few years ago affected a very high proportion of the student population. This information should be prepared and circulated by veritable "observatories" of the trend of occupational requirements and of the corresponding training at higher educational level, and should be made available to both secondary school-leavers and/or first-cycle higher education students, as well as to training institutions and their staffs. This also implies recognition of academic equivalence for students already engaged in a type of study normally leading to teaching, especially where the nature of their studies is relatively specialised.

Long-term measures

The difficulties experienced by many educational systems in promoting various forms of innovation have led for some time to recommendations for changes in training as a whole, not only for teachers in the strict sense but also for other categories of staff who have to collaborate with teachers or to support their activities. It has been claimed, for example, that the objectives of greater equality of educational opportunity, socio-cultural organisation (for services, in particular) and personal assistance (social workers, for example), applying also to the adult population in more integrated collective facilities, and therefore the target of internal and external mobility of educational staff, were hardly compatible with either the monolithic structure of certain establishments or with the institutional isolation of teacher training even when this takes place in institutions with multiple vocations (such as the universities). Furthermore, both the need to adapt training and the need for mobility call for the establishment of an effective system of continuing training integrating most coherently periods of initial, induction and in-service training.

In almost all Member countries, the different categories of teachers are trained at higher educational level and the difficulties experienced in adjusting teacher supply and demand reflect the more general problem facing higher education with regard to the education/employment relationship. It does not therefore seem possible to speak of a long-term improvement in the teacher supply situation except in relation to a review of the place of educational staff training in higher education, which will naturally include the actual policies and procedures of acceptance for higher education.

It should in fact be noted that certain Member countries (e.g. United Kingdom, Sweden or Germany) which have recently reviewed the overall structure of their higher educational system have done so in relation to the place to be allotted to the institutions responsible for educational staff training. For instance, the general framework established by the 1972 White Paper in England and Wales has been accompanied by recent practical measures for the reorganisation of higher educational institutions and especially those responsible for teacher training.

In the event of less integrated studies, it may be hoped that even previously separate institutions will be in a better position, through equivalences and new training formulae, to put on the labour market people who are more polyvalent at the end of their studies and yet have received a sound initial training on which it would be possible to build rapidly a professional specialisation enabling them to work either inside or outside the educational system.

Such formulae would have the advantage of making it easier to adjust supply to demand by creating in fact a sort of "potential reserve of talent with a teaching vocation" in society. The indispensable condition for such a development would obviously be that the labour market for these new qualifications must be broad enough to avoid any recurrence of the mismatch between training and employment, and sufficiently flexible to enable people so qualified to be employed part-time in a variety of ways. The first results of the various countries' experience with restructuring higher education should therefore be appraised in relation to teacher training. This problem might be examined in the wider context of the studies and models concerning policies for admission to higher education and the relation between education and employment at this level. This kind of survey might be useful for subsequent analysis of training content.

Longer-term measures cannot stop here, of course, since they might well be regarded merely as a means of restructuring higher education in relation to the employment market and not as the result of mature reflection and decision-making with respect to the training of educational staff and their status in society. Many proposals have certainly been made concerning the all-round teacher training needed for internal mobility (or even external mobility) or concerning the concept of continuing training for the progressive development of an individual's personality and career. Unfortunately, no real evaluation and comparison have as yet been made at international level of programmes corresponding to such ambitions and, of course, to the various subsidiary training targets created by the whole range of innovations which are gradually changing the roles and functions of educational staff.

The same applies if certain countries aim at all-round teaching qualifications, whether horizontal - several subjects being taught to pupils in a given age-group - or vertical - an identical subject being taught to more than one age-group. Yet, countries seem somewhat unclear as to how future teachers should be trained to promote such versatility. In all events the more flexible use of teachers can only be based on a high level of qualification, particularly in the education sciences and other pedagogical disciplines.

For instance, it would be desirable to determine the limits of teacher versatility in relation to the tasks to be carried out at the various levels of the educational system. Failing such an analysis, educational staff training might become diluted into a form of general higher education, admittedly "renovated" but not adapted to school requirements. Another facet of this problem is the process of the professional socialisation of student-teachers. Certain analyses of career choices in higher education (1) tend to show that early contact with the theoretical and practical realities of teaching is a positive factor in favour of commitment to the teaching profession. The study referred to demonstrates that initial training of the "concurrent" type appears to be more effective than training of the "end-on" type and tends to question undifferentiated broad common core curricula of the university degree type. However, "end-on" training, at least the traditional type mainly for specialist secondary teachers, can make the supply of this category of teachers and their recruitment conditions more flexible.

---

(1) For example, New Patterns of Teacher Education and Tasks, The development of student-teachers - A comparative study of professional socialisation, OECD, Paris, 1974.

In the absence of a study on the progress of experience in this area, it is difficult to know how to reconcile the quantitative and qualitative aspects in the long-term adjustment of supply to demand, not only for teachers but also for other educational staff. Since - at least for the Member countries - the Education Committee's Working Party on Teacher Policies came to a number of conclusions several years ago concerning the roles, functions and tasks of teachers and the general framework of their training and since CERI is carrying out an in-depth analysis of new forms of in-service training, it is now possible to undertake more specific studies on the changing training requirements for all educational staff. These are mainly qualitative requirements set in an active, effective and coherent policy of education/employment relationships at higher educational level. By training, we mean a continuing process of education. As it would not be possible to cover immediately all educational staff, it will be necessary that the Member countries make their choice in the light of any priorities which might be discerned and of the most relevant experiences.

x
x x

To conclude, neither the information provided by Member countries nor the data in the possession of the Secretariat allow for more than long-term policy assumptions which will be almost necessarily qualitative and indicate a number of short-and medium-term measures of a rather quantitative, ad hoc and relatively fragmentary nature. It should also be emphasized that the detailed diagnosis contained in Part I of this report and the possible implications discussed here do not necessarily apply to all Member countries or to all levels or types of education. It is hoped that this report could contribute to a preliminary clarification of a very sensitive policy problem and thus permit the interested social partners in Member countries to deepen their analysis of the more specific issues they are facing in this area.

ANNEX

Guidelines

1. The data of the Report have been collected in using the guidelines which had been approved by the Working Group on Teacher Policies. Its objective is to help the Member countries to prepare their contribution. It focusses only on the issues dealing with the trend in teacher supply and demand and it aims at a better knowledge of the present and future (if calculated at national level) state of this national trend. At present, the situation differs not only from country to country, but also within individual countries, according to the various categories of teachers.

2. This essentially concerned primary and secondary school teachers. When preparing their contributions it would be preferable if Member countries could follow the OECD Classification of Educational Systems where general secondary is defined as an "education which is not a direct preparation for an occupation" and technical education which is designed as direct preparation for an occupation or trade. Secondary education could be divided into :

(a) general or technical education offering pupils, upon completion, a relatively good chance of continuing their studies in a higher education establishment;

(b) general or technical education after which pupils have little chance of going on to higher education.

If this classification cannot be used, it could be possible to replace it by a classification distinguishing the teachers teaching in the period of compulsory schooling and the teachers teaching in the period of post-compulsory schooling, or by another classification which must be clearly defined.

3. Replies from the countries could thus be based on the elements presented in Table 1 below :

Table 1

Trends in Teacher Supply and Demand (1) by level of education (2)

			1975 (3)	1980	1985	1990
PRIMARY		- Supply				
		- Demand				
		- Shortage/Surplus				
SECONDARY						
general	(a)	- Supply				
		- Demand				
		- Shortage/Surplus				
	(b)	- Supply				
		- Demand				
		- Shortage/Surplus				
technical						
	(a)	- Supply				
		- Demand				
		- Shortage/Surplus				
	(b)	- Supply				
		- Demand				
		- Shortage/Surplus				

---

(1) - This table concerns the total number of persons with teaching responsibility, even if a part of their working time is not devoted to direct contact with the pupils (for example : headmasters giving a limited number of teaching lessons will be included; but those who do not teach at all will be excluded).

- This table refers to full-time equivalent as the demand for teachers is generally assessed on this basis; if it is not the case, please say so and present full-time and part-time teachers separately.

(2) - If the countries do not have figures, it may perhaps be possible to give a general picture for each level indicating simply :

- the present and likely future situation (shortage or equilibrium or surplus);
- the approximate order of magnitude of the expected difference (in %).

(3) - or the nearest year that could be representative of the present situation.

4. A Table 2, modelled on Table 1, could be presented to show the trends in supply of and demand for subject teachers in various levels and types of education (for example : special subjects at primary school : music, plastic arts, physical education, art and crafts; scientific, technological and humanities at secondary school; the trends could be presented by groups of subjects or for individual subjects).

5. The two tables could be usefully accompanied by comments specifying :

(i) the various reasons for possible imbalances;
(ii) how these imbalances appeared or will appear in the educational systems;
(iii) the various measures which have already been taken, and/or those which are under consideration, to regulate in the near future the supply of and demand for teachers.

6. It would also be interesting to know to what extent the possible increase in the demand for teachers, in the levels and types of education which are not covered by the guidelines (for example : pre-school education, special education, higher education, adult education) might influence the existing and future supply of and demand for primary and secondary school teachers.

PART THREE

TEACHER POLICIES AT THE LEVEL OF COMPULSORY EDUCATION

A Clarifying Report by the Secretariat

prepared with the help of

S.J. Eggleston

Keele University, United Kingdom

I - INTRODUCTION

Compulsory education takes a multitude of forms. It may be continuous or divided into stages, start and finish at varying ages, be encompassed by a range of legal requirements.(1) Yet in one form or another, compulsory education for all young people up to a specified minimum age is a characteristic of the arrangements of all Member countries of OECD and indeed of almost all societies throughout the world with any pretensions of being developed. Though with a history no longer than a century in most countries and considerably shorter in many, it has achieved all the attributes of an established social institution that is taken as given by most men and women as constituting part of the normal life cycle of the human being. From such a secure position in human affairs, universal compulsory education has shown a remarkable resilience in the face of the economic storms that have swept the world in recent years. The statistics of OECD countries show that compulsory education still retains a substantial share of the gross national product in all countries and, in most, effectively holds its own against the many competing demands for scarce national resources. Yet though the total cost of compulsory schooling is great, the expenditure per pupil in most cases is substantially lower than that of other sectors of education.

Compulsory education is not only remarkable for its capacity to withstand economic hazards but also its capacity to withstand political and ideological criticism. Contemporaneously with the economic onslaught has been a range of critical attacks from within and without the education system. One of the more famous critics has been Illich who has suggested that compulsory schooling is no more than an organised wastage of the talents of the young; restraining, restricting, stultifying and even destroying their capacities through a process compounded of boredom, alienation and subordination. He writes: "School makes alienation preparatory to life, thus depriving education of reality and work of creativity". Jencks (1972), in his well-known volume *Inequality*, has been widely quoted as asserting that "Schooling makes no difference". Bourdieu and Passeron (1970) have seen school as a component of a largely inescapable system of social reproduction whilst a more recent and widely circulated critique of Bowles and Gintis (1977) written from a Marxist perspective sees compulsory schooling as a device whereby a capitalist society obtains the 'right kind' of labour that it needs to sustain its capitalist economic system, portraying education as subservient to the dominant economic idealogy, turning children into a pre-formed labour force of appropriate size distribution and attitude.

---

(1) In view of the many administrative forms it will be considered globally in the paper, though due recognition of the national variations of compulsory education will be made as appropriate.

II - THE OBJECTIVES OF COMPULSORY EDUCATION

Though such critiques are taken seriously and achieve considerable attention, there is little evidence that they in any way diminish the now almost unshakeable permanence of compulsory education in modern societies. As an essential preliminary to our discussion of teacher policies at the level of compulsory education, we must ask ourselves why it is that the momentum of compulsory education is so great. Unless we identify the dynamics clearly we may be in danger of addressing our policy considerations to superficial issues rather than fundamental ones and of making recommendations for change that fail to take due recognition of the more permanent and unchanging features of our educational arrangements. In order to examine this difficult area, it is helpful to ask the simple but essential question, what is it that compulsory education provides that is seen to be so necessary for modern societies?

The key to answer is surely that compulsory education is the inescapable route to becoming an adult in modern societies. For the individual, it provides the only way in which the privileges and responsibilities of adulthood can be achieved and be seen to be achieved. For the society, it is the only generally available way of ensuring that the wide range of human talents, skills and competences becomes, at least partially, used in a socially viable way. In short, it provides a service that is essential for the individual and also for the society in which he lives. It is, as we shall consider, a service that in many ways may be more effectively performed, but even at its most minimal level of effectiveness there is little doubt that the experience of compulsory education is the essential feature of the transition from infancy through childhood and adolescence to adulthood. It is important to emphasize that compulsory schooling should not be a process whereby the young are brought to conform to the behaviour of existing adults - such a process could only destroy all social development. Rather it is to enable them to use their own talents and abilities as adults in their generation.

While it may be possible for the isolated individual to escape this process and still survive, it is inconceivable that a majority of even a substantial minority could now do so without hazarding their own fulfillments and that of the society in which they live. Unlike other living organisms, human beings do not become mature solely by nature; they require a complex social process in order to do so.

Though the transition is continuous throughout the whole period of compulsory schooling, it is normally divided into two or even three cycles - often with quite different characteristics. In some OECD countries these cycles are closely linked; in others there is a pronounced separation with differences in teaching, methodology and curriculum. The true ideal of comprehensive schooling is to emphasize the continuity and coherence of the various cycles and to link them not only with each other but also with the life that preceeds them and follows them - though it is recognised that, in many countries, a range of political and administrative circumstances may impede this ideal. An important objective of teacher policies must be to minimise these difficulties and to emphasize the similarities between teacher and pupil tasks at different stages in the total process of compulsory schooling.

Compulsory schooling has become an essential part of that process in modern societies augmenting, however, rather than supplanting, the process of informal education which still plays a central part in human social development. Much of this informal education still takes place in the home and community. But some of it takes place in the schools where, as Jackson (1970) has reminded us, the 'hidden curriculum' offers a vital preparation for the role of modern life, enabling young people to learn informally about such things as the rules of competition, tolerating frustration, learning acceptable work norms and much else. In total, the range of skills and understanding to which compulsory schooling gives rise are complex and often sophisticated in a manner that is only incompletely realised by those who administer them or those who receive them.

In modern societies, however, the aims of compulsory education take on a considerably wider importance. Its task is not only to prepare children to enter active life but also to prepare those continuing with their education for more or less diversified secondary courses and possibly for higher studies. In addition, it should give them all a sufficient taste for learning to enable them to return to educational activities afterwards throughout their life, particularly if systematic policies of recurrent education are implemented. They should be enabled to choose these activities according to their tastes and needs rather than for purely vocational or economic purposes.

Because of its privileged position as the only type of education open to all, compulsory education has an important role to play in the equalisation of opportunities. For this it should give individuals the possibility of discovering and developing their particular aptitudes without establishing any hierarchy among them; it should more especially help those who because of their background and environment have most difficulty in being integrated into the school and also into society. Finally, it should play a major part in bringing pupils through adolescence to adult status so that they become capable of playing a full role in society. In this the school has to some extent to make good the present shortcomings in the role of the family, the community and the enterprise.

In order to respond to these various objectives which may vary in importance from country to country, this level of education should be common to all, so as to avoid any selective character. It should be adapted to the aptitudes and learning rate of individuals to enable them to develop their own personality harmoniously; it should also open on to real life keeping contact with everything in the environment that can contribute to the learning processes of the pupils.

However, only a few countries have recently restructured compulsory education so as to consider it as a whole, adapting it to the requirements of the pupil's various stages of development; these have set up basic schools taking all children from the beginning to the end of compulsory education. In most countries there is a more or less marked division between the first and last years of such education. The problems raised by this division, which generally occurs at the time when the pupil is entering the difficult period of pre-adolescence; a division which most educationists agree is harmful, are compounded by those caused by dividing curricula into rigid sections and compartmentalised disciplines and by the heterogeneity of training and status of staff.

In view of the structural problems of existing systems of compulsory education, efforts to date have focused on improving existing systems. Such improvements have included:

- individualisation of education and its adaptation to the learning rate of each pupil;
- opening to the outside world and use of the immediate environment;
- gradual participation of pupils in their own learning;
- creation of situations likely to encourage pupils' affective and physical development as well as their cognitive development;
- support activities for pupils in all kinds of difficulty;
- collaboration between teachers in schools of different levels;
- measures likely to facilitate the transition from one-teacher to multi-teacher teaching;
- decompartmentalisation of disciplines.

III - THE CHARACTERISTICS OF PRESENT DAY SOCIETY

This resumé of compulsory education has not only a general but also a particular relevance for an anlysis of teacher policies in the late 1970s. There have, in recent months been strident calls from many quarters to re-emphasize the basic functions of compulsory schooling and to ensure that they are effectively performed. The British Prime Minister, in October, 1976, achieved widespread public response when he drew attention to the need for compulsory education to ensure basic standards of competence as a preparation for work and adult life in general and, by implication, drew attention to the failure of schooling to achieve such goals consistently. In Britain, as in most OECD countries, there has been increasing public concern about standards of linguistic usage, literacy and basic numeracy and many 'horror stories' of the incapacity of young school leavers on entry to work. As the reports of the OECD Bristol Symposium in 1976 make clear, a general feeling was that the great expansion of compulsory education in the last twenty-five years has not fulfilled all expectations, either in terms of individual development, social equality or the provision of adequately prepared young people for working life. In addition to these general uncertainties there are many specific complaints.

It is widely believed that the abandonment of emphases on social conformity has reached dangerous limits and that the negative attitude of some young people constitutes an increasing threat to aspects of the social and economic life of many countries. In a number of OECD countries, reports on adolescent vandalism and alcholism in and out of school indicate the serious worries not only of informed members of the lay public but also of professionals. The pastoral role envisaged by many progressive teachers in the last decade is now being called for outside the profession as well as within it.

The decline in school populations

This reawakening of interest in the fundamental purposes of compulsory schooling has coincided with a phenomenon that, a decade ago, was almost wholly unanticipated in most of the Member countries of OECD. This, of course, is the sharp fall in the birth rate that has occurred throughout most Member nations and which is already bringing marked reductions to the numbers of young people experiencing compulsory education.

Teacher policies had been based upon the almost unchallenged assumption that an ever increasing school population would lead to an ever growing requirement for teachers. Now, in most societies, the rise in the child population that occurred in the 1970s is unlikely to continue and may even decline in many countries. The demographic implications are considered in detail in "Present situation and future prospects of teacher supply and demand in Member countries" (**Part Two of this volume**). One example of such implications is to be seen in an announcement of the Secretary of State for Education and Science of England and Wales in 1975 :

> "The prospective decline in the school population should enable staffing standards to be improved with fewer teachers than the previous calculations indicated. It also calls for the careful management of the future size of the teacher force so as to avoid a sudden swing from growth during the present decade to contraction during the 1980s, as the numbers of pupils continue to decline.

With these considerations in mind, and following the advice they have received from the Advisory Committee, the Government now intends to plan for a teaching force in the maintained schools in England and Wales reaching an upper limit of 480,000 to 490,000 by 1981.

Since the need for newly-qualified teachers will be reduced, it will be necessary to restrict the output of newly-qualified teachers. This means that our teacher training capacity outside the universities will have to be contracted to about 60,000 places. As a result, some 30 colleges will have to give up initial teacher training, though as many as possible will be used for other educational purposes. Within this total special attention will have to be given to the balance of training and particularly to the need for specialist teachers."

By December, 1976, the continuing decline in birth rate had rendered even these figures obsolete and the envisaged teacher force of 480,000 to 490,000 by 1981 had been reduced still further to 450,000: a figure that is still seen to allow for some improvement in staffing standards. In consequence, a further 28 teacher training colleges were listed for closure and a further 14 for merger in January, 1977.

Assessment of monitoring of performance

The concern with standards achieved in compulsory schooling has been heightened by the straightened economic conditions to which reference has already been made. In the recent past, employers, hungry for labour, had little choice but to accept the products of the compulsory school system thankfully and may have been muted in their criticism of the schools by their anxiety not to alienate teachers and pupils. But in a situation in which juvenile unemployment has become characteristic in many Member states of OECD, employers can be far more vocal in stating their requirements and far more sure in their rejection of young people who fail to satisfy them. One of the consequences of the renaissant concern with standards and the new militancy of employers is the reintroduction, on both sides of the Atlantic, of attempts to monitor the performance of compulsory schooling and the emergence of a variety of local and national strategies to assess the level of attainment of students. The Assessment of Performance Unit in England and Wales is a typical example, as is also, to a lesser extent, the Educational Testing Service in the United States. Both are concerned to help teachers to identify the outcome of compulsory schooling at various stages. It should be emphasized, however, that while these strategies, to which further reference will be made later, may sometimes be regarded as an attempt to return the schools to a narrow basic curriculum, they are rather a means of effectively assessing the outcome of many of the newer strategies of teaching and the newer curriculum contents. They constitute an attempt not only to assess the work of teachers in a way that is professionally acceptable and responsible, but also to reassure employers and the public at large of the levels attained and of the value of the innovatory and less well understood approaches to compulsory schooling.

An example of the strategies whereby this is to be achieved is indicated in the memorandum issued on the Assessment of Performance by the Department of Education and Science of England and Wales which is exploring three approaches to the assessment of performance as a basis for deciding whether action is necessary and, if so, by whom. These types are :

(a) the systematic individual assessment and observation of all children at a particular stage or stages in their life in order to assess their progress and to detect particular needs, actual or potential;

(b) public examinations, which are taken by many, though not all individual pupils at 16+ (GCE O level and CSE) and 18+ (GCE A level). They provide evidence of pupils' attainment which potential employers or institutions of higher education may use as part of their judgement about the suitability of individual school leavers for employment or entry to further education;

(c) assessment by sampling of the performance of the education system or local parts of it, so as to obtain more certain indications of what the general levels of achievement are.

With a view to achieving objectives very close to those mentioned in (c) above, the National Centre for Education Statistics of the United States Department of Health, Education and Welfare took over the programme for National Assessment of Educational Progress (NAEP) which consists of annual surveys of the knowledge, abilities and attitudes of youngsters aged 9, 13 and 17 in such areas of learning as mathematics, science, reading, writing, civics and literature.

The series of recent events that have been reviewed so far, constitute a valuable opportunity to re-examine and re-define teacher policies in compulsory schooling, of a kind which has seldom been available. The concerns of parents, employers and the public at large, shared by educators, have created a new enthusiasm for public debate and analysis and a desire for further evidence of the outcomes of education. Economic stringencies offer further reinforcement to the process of re-examination, not only because of the problems of employment being experienced by the products of compulsory schooling but also by the considerably greater need for the compulsory school system to justify its claim on national resources at a time of greatly intensified competition. The reduction in the need for new teachers gives the teacher training institutions the necessary impetus to re-examine their training and preparation for professional work; the reduction in numbers allows them to impose more rigorous standards of recruitment than were often possible in the years of teacher shortage. Similarly, the schools, in appointing teachers, are able to exercise a similar rigour in the selection process. In short, the time is opportune for the determination of new teacher policies and this paper, in the light of the assembled evidence of the OECD Member nations, attempts to indicate where such initiatives may lie.

It must be clearly recognised that a state of affairs that provides an opening for policy initiatives does not also provide the initiatives. The essence of the work to which OECD has set its hand is to develop such initiatives so that, faced with the new situation, policy makers will not respond only with expediency - important as this must always be - but also with an informed view of the possibilities and the consequences that spring from them.

Fortunately, the thinking about new policy initiatives is well developed in the various educational systems of OECD Member countries, much of it facilitated by the work of OECD itself. The remainder of this clarifying report is devoted to a list of the emergent policies, all of which to a greater or lesser extent derive from the practice of one or more Member states.

IV - NEW POLICIES FOR TEACHER ROLES

The Curriculum

The overriding policy initiative here as always must be to accord the highest priority to the needs of the pupil. It must respond to his individual requirements within the context of the society in which he lives and to his developing relationship within it that can enable him to participate in the exercise of decision making as a democratic adult rather than receive an education designed to put him on the 'receiving end' of the decisions of others. The key to the implementation of such policies must lie, as always, in the curriculum. Unquestionably, this must present the full range of knowledge, skills and understandings that are needed to live fully in a modern society.

Such a curriculum must provide understandings at all levels. In the recent past teachers have been in danger, through the best of intentions, of concentrating on providing access to the higher reaches of learning and identifying the success of our policies in terms of the advanced achievements of the few. In the scenario with which this clarifying paper began, it is easy to see that we must, in our policies of teacher role, reaffirm the importance not only of high attainments within the curriculum but also the basic levels of performance in numeracy, literacy and the other central skills on which the work of the schools and of the society is based.

It is now seen to be axiomatic in many Member countries of the OECD that a core curriculum should be identified and that mastery of this core curriculum should be seen as central to all else in education. The concept of core curriculum is one in which 'a guaranteed minimum' of basic skills are achieved by every child is now under consideration in a number of OECD countries. A good example is offered by the recent reform of French basic schooling. Teacher policies must be designed not only to identify and regularly update this core curriculum but also to ensure that it is effectively made available to all young people so that none shall be disadvantaged through an incapacity to read, to count or to communicate. The precise content and level of the core curriculum may vary between different countries. In most, basic language and number skills are present, in some versions other subjects are added such as technology in France. Unquestionably, the core curriculum will include both cognitive and connative elements as well as motorskills. In all the guiding principle is seen to be "the minimum for all; the maximum for each individual".

A further important aspect of the teacher's role must be to ensure that the various components can be seen in an integrated way not only by teachers but also by their students and that the compartmentalisation which in the past has often failed to indicate the interconnections of say, science and geography, can be overcome. Only if students can come to survey and appraise their total stock of knowledge are they likely to be able to use it fully. Making knowledge usable is perhaps one of the central requirements of the demands of modern societies upon their education systems. The criticisms of compulsory schooling are commonly not based upon the content but upon the allegedly limited capacity of students to use what they have learned. Such a use must of necessity be flexible, linked with initiative, imagination and creative capacity so that the young people may be able not only to use their understanding of situations that exist during their schooling but also in the rapidly changing situation that they will experience only after compulsory schooling. A readiness to return to some form of continuous education as and when necessary is closely linked with this requirement. In practical terms, policies for compulsory schooling designed to achieve such objectives are likely to focus increasingly on problem solving rather than rote learning. The organisation of curriculum activities such as projects and assignements wherein pupils solve real life problems, is likely to form an essential feature of the teacher's role.

Preparation for Work and Adult Life

One of the important policy initiatives for compulsory schooling which has been reaffirmed strongly in recent years has been the need to prepare young people for the working lives they are likely to lead. In the early days of compulsory schooling, this was arguably far less necessary than it is today. Young people had abundant opportunity to mix with adults at work, in the home, in the local community and even in the small workshops and factories situated close to their homes. Now it has become comparatively rare for young people to see adults at work. The young person living in a large high rise housing estate in a large residential connurbation in most developed societies may see little of the work of adults outside the school. He may only encounter the postman and the refuse collector and with the increasing costs of labour, even such encounters may soon cease to be available. It is therefore likely to become an increasing imperative of teacher policies in compulsory education to enable teachers to provide opportunities for young people to see and experience adult work and for teachers to be trained and sufficiently experienced to organise this work meaningfully in conjunction with local employers. It is emphasized that such experience is not in any way conceived of as a form of vocational training nor as an uncritical period of conditioning in the way which Bourdieu and Passeron (1970) or Bowles and Gintis (1977) suggest. An important feature of it would be not so much to prepare young people to perform work operations but rather to begin to understand some of the basic roles of the world of work; characteristics that are as important for young people in modern societies to learn as the rules of grammar or of science. These vocational rules include an understanding of the inescapable economic facts that govern all work in modern societies - the economics of scale and quantity production, the wages system, labour intensity, product development, production and marketing and much else. A wider knowledge and understanding of such characteristics is likely not only to facilitate the entry of young people into industry but also to help them to participate more meaningfully in industrial relationships whether as members of unions or management. There is no reason why such work could not count for course credits in the same way as other areas of the curriculum. Wider understanding may well help to overcome some of the problematic labour relationships of many Member countries of OECD which can be often seen to spring from ignorance on many occasions. The evidence of Swedish compulsory education (1976) reaffirms this view :

> "Even if the choice of occupation lies with the pupils, some direction and control should be exercised so that the pupils boys and girls, acquire a knowledge of occupations and aspects of working life with which otherwise they would probably not come into contact. Schools will be able to arrange for local courses of study by adjustment of the time-tables. This may be regarded as a part of the individualisation process. Such measures must always be planned with the pupil and his parents. Adjustments of the time-table should also be possible for education outside the school".

To implement such contacts with working life it will be necessary for teachers themselves to have greater experience of working life outside school. Later in this document (page 18) it is urged that more mature entrants with a variety of work experience be recruited to the profession; appropriate in-service courses are also advocated.

Interpersonal relationships

Change in teacher/pupil relationships may make it necessary for the teachers to extend their contacts with pupils beyond those essential for the transmission of knowledge. In order to know them and help them to participate in their learning and overcome all their difficulties, they must devote a far larger amount of their time to establishing personal relationships, possibly in the form of a "tutorship", and creating situations conducive to full development. Similarly, teachers can no longer work in isolation, they must realise that they are only one of the elements in a whole comprising other teachers, various categories of other school staff, parents and other members of the community who may contribute to the intellectual, cultural, physical and affective development of the pupil. Consequently they must consider the establishment and maintenance of close contacts with all these other elements as an important part of the work and encourage school-community involvement in particular when the school is required to become the centre of socio-cultural activities and the home of various collective facilities. If teachers are to be able to face up to their new roles and new tasks, it is essential that their training should prepare them for acquiring attitudes favourable to the new objectives they have to attain.

Not only must teacher policies make teachers into competent instructors but also into competent organisers and counsellors, sharing much of their responsibility with their students. It is essential for teachers of the future to possess not only adequate knowledge of subject matter and appropriate professional skills but also to have a personal sensitivity to the needs of students considerably in excess of that which was once considered to be adequate. Bernstein (1971) has emphasized the key nature of this sensitivity. To paraphrase him we may say:"If the consciousness of the teacher is to be in the minds of the children, then first of all the consciousness of children must be in the mind of the teacher." Such a shared consciousness is increasingly likely to be at heart of the capacity in inter-personal relationships that it is so essential to achieve.

Closely linked with such development of inter-personal relationships is the need for further new 'partnership' roles whereby teachers and pupils share responsibility for the work of the classroom. Teachers will bring to this relationship their specialised knowledge of a subject and sensitive knowledge of the needs of their children, pupils will bring their own enthusiasms, needs and ambitions, their own perception of the classroom.

Without abandoning their present role of instructor and dispenser of knowledge, teachers must also become counsellors, leaders, participants, and organisers, responding to the special needs of each pupil. Instead of deciding on their own what subjects to discuss and what exercises to set their pupils, they must know how to motivate and guide pupils and to give them the possibility of intervening in their own learning. They must also be able to identify the difficulties encountered by individual pupils and to resolve them either by themselves or with the help of specialised staff. Their assessment of pupils must be based much more on the acquisition of methods and procedures than on the acquisition of knowledge and should take account of their affective, physical and cognitive development.

While the teachers' main task in the traditional system was classroom teaching, they are now likely to be increasingly required to devote part of their time to other tasks and in particular to preparing and planning pupils' work and to inter-personal relationships.

Evaluation

But perhaps the greatest objective of the new teacher's role is that he should evaluate his work; to monitor the progress of his students and to be able to know when critical stages have been reached or missed. He needs to be able to compare the development of different children not in a crude competitive way but in a way that opens his eyes to a clear diagnosis. Expressed in the simplest level, every teacher should be able to justify the gains made by a pupil who has attended his class for a week or a month or a year; to be able to indicate clearly what has been achieved that would otherwise not have been achieved. The need is not so much to satisfy the demands of public accountability, though this can no longer be ignored, but rather to facilitate the teacher's own professional duty to diagnose his students' capacity and to provide them, in the light of his diagnosis, with the appropriate teaching. Every teacher should be able to identify for each of his students a range of objectives, not only long term ones but also intermediate objectives that chart his path or personal development.

The Japanese contribution to the discussion of compulsory secondary education (1976) submitted to OECD suggests that teachers will require:

> "(1) To have better understanding of the individual pupil by making full use of data collected through a systematic and continuous observation and other methods;
>
> (2) To guide pupils to the awareness of their own ability and aptitude so that they may well be able to make their self-expression in the course of pursuing their study life or of leading their working life after graduation;
>
> (3) To guide pupils to the better understanding about their study life and working life after graduation, to the self-awakening of the responsibility they have to assume as members of society, and to a greater interest and a positive attitude towards their future course of life."

The New Zealand contribution to the discussion of compulsory secondary education (1976) submitted to OECD, reaffirms that:

> "Student progress is monitored at all levels so that each student is aware of his progress and can have his future programme provided and adapted according to his achievement. They should also indicate the extent to which parents, pupils and others are kept informed of each student's progress and achievement."

A major problem for many teachers is not their willingness but their capacity to evaluate, and here the initiatives being undertaken by national bodies, to which reference has already been made, are likely to be crucial. An important feature of such bodies is to function as a support to teachers to help them to develop their own evaluation capacity. In an important recent study, Sharp and Green (1975) have drawn attention to a major problem experienced by teachers in their ability to account for the development of children. They show that even competent teachers, well able to achieve excellent results, find extreme difficulty in explaining and justifying their work. In interviews at 'Mapledene', a progressive primary school within the compulsory education sector known for its new curricular approaches, they interviewed a number of teachers about the curriculum in Mathematics. One of the most competent teachers was recognised to be Mrs. Carpenter. Yet in the transcript of their interview with Mrs. Carpenter, the researchers demonstrated major shortcomings in her capacity to explain and justify her performance.

Mrs. Carpenter remarked that this formal approach would have meant that 'we would have missed a lot of things which we do now'. When asked that sort of things would have been curtailed, and what difference it would have made, she differentiated her own practice from the situation:

'When you've got a set plan...everything in its place... you taught length immediately after you taught so and so, and it was taught, you know, it was not a matter of children learning really, not in the way that we'd been thinking that they should be learning.'

Interviewer: How do you mean?

Teacher: I mean we all, well, I have a little plan but I don't really....I just sort of, mmm, try and work out what stages each child is at and take it from there.

Interviewer: How do you do this? How does one notice what stage a child is at?

Teacher: Oh we don't really know, you can only say the stage he isn't at really, because you know when a child doesn't know but you don't really know when he does. Do you see what I mean? You can usually tell when they don't know (long pause). (There was a distraction in the interview at this point.) What was I talking about?

Interviewer: Certain stages, knowing when they know...

Teacher: -and when they don't know. But even so, you still don't know when they really don't (pause) you can't really say they don't know, can you?... That's why that plan they wanted wouldn't have worked. I wouldn't have been able to stick to it, because you just don't ....you know when they don't know, you don't know when they know.

(The interview continues in this manner)

Sharp and Green argue that an important component of teacher policies must be the provision, for all teachers, not only of the capacity to undertake new activities but also of the provision of an accounting language whereby they may more adequately justify and explain their work, not only to the public at large, to themselves and to their colleagues. Certainly, such a development may well help teachers and others in the education service to avoid what Byrne (1976) has labelled defensive reflexes, a well known form of avoiding criticism or even explanation of what is happening in compulsory schooling. A typical example, cited by Byrne is a criticism, which may or may not be justified, that children have performed badly in an examination. A predictable teacher response to this is to say that "Well, there are more important things than examinations, when all is said and done". Such a reply, very different from that which would have greeted a word of congratulation upon the examination results, is not only inconsistent but it is also virtually meaningless and certainly unhelpful. Teachers better equipped to explain and evaluate their achievements may well be able to avoid resorting to such defensive strategies. They may indeed also be able to avoid the heavy reliance on public examination results with all the distortions and complexities to which the examination system gives rise when used as the central way of recording school achievement. But in the meantime, there is clearly considerable argument in favour of policies that continue reform of the public examination system so that it may more fully represent and further the new educational initiatives.

Community Relationships

There is little doubt that, in most member countries teachers will need to be able to establish a fuller community involvement not only so that their students will be able to obtain an entrée into adult life but also so that they will be able to share, with the community in which they teach, responsibility for the all round development of their work. Portugese evidence (1976) submitted to OECD speaks of the teaching of Civics and community studies - designed to provide pupils with a knowledge of community life through direct contact with the activities and existing problems and through responsible action. It will be designed to provide teachers with the possibility of planning the activities to be undertaken in accordance with the specific situation of the school and the region. Finally, it will be designed to promote community institutions with the possibility of taking part in education and organising the schools so that the latter are not alienated from the environment in which they are located.

It is likely that in the countries of most modern societies, teachers will find themselves being called upon to assist children to participate more fully in societies that are increasingly multi-racial and, even if they find themselves teaching in schools populated solely by indigenous children, they will need to educate such children to participate in a wider society composed of many races. Many teachers will certainly need to know how to offer a soundly based education to immigrant children from many lands, to have a capacity to help them to adjust to their new culture patterns without devaluing or discarding the old.

V - NEW POLICIES FOR TEACHER TRAINING

Selection of Students

The changed condition of compulsory education has many implications for teacher training - in its selective arrangements, in its structure content and practice and in its certification. As many OECD members have discovered, teacher training offers one of the more accessible and promising areas for the introduction of new teacher policies. A number of these areas for initiative, arising from professional, social, political and economic considerations, are considered here.

The decline of the anticipated teacher population in most OECD countries will allow policies of more discriminating standards in entry qualifications for teacher training courses than has always been the case in the recent past. The condition is likely to continue unless and until at some future stage, a rise in the birth rate occurs at a time when the age cohort available for teacher training is depressed as a result of contemporary birth rate figures. Providing care is given to maintaining the attractiveness of careers in teaching, one aspect of more discriminating standards is likely to be the higher academic threshold for entry to training courses and there are some obvious examples where this is likely to be desirable. Most strikingly it is likely to be required that all teachers have basic competence in Mathematics and in communication in their mother tongue at a reasonably high level in view of the renewed emphases being placed upon achievement in these subjects. There are other areas too where enhanced academic standards may offer a real prospect of an improved teaching performance.

Yet it is not only in academic selection that standards may be raised. It is equally desirable to find newer ways of ensuring that only students with personal and emotional characteristics of an appropriate kind enter the teaching profession. The damage that may be done by teachers with personality defects is far greater than that which may be done by those with academic defects. Every effort should therefore be made to ensure that the student-teacher profile is not based on traditional teacher characteristics which student-teacher may deems it desirable to copy. Such a basis could lead to the elimination of those students most amenable to change. Careful screening of candidates' teaching offers one way to achieve greater rigour in this area; it may also be worth experimenting with admission policies that call for a period of pre-training experience with children or young people.

Another approach currently being explored in some countries is a deferral of full professional training until after a preliminary period of study has been completed which in addition to offering a diagnosis of suitability for teaching may also keep open alternative careers for those who decide they do not wish to teach or who indicate that they are unsuited to teaching. This has been the case for many years in those Member countries where students obtain their university degree before commencing teacher training. Further experimentation with such schemes may also allow a considerably more flexible determination of the number of teachers qualifying each year and thereby alleviate the situation where many are allowed to qualify as teachers but are unable to find employment.

It is likely that teachers for compulsory education will in the future be generated through a variety of training programmes ranging from those entering on a specialised course of training in a monotechnic institution with a firm commitment to teaching through to those entering a more general course in a polytechnic institution without any initial commitment to a profession. The professional and economic factors may well lead to an increasing emphasis on the latter forms with their open, pluralist and flexible programmes.

A further attractive source of teachers lies in the entry from mature candidates who have previous experience in other walks of life. With the increased emphasis on links between school curriculum and adult life in the community, such candidates are likely to have much to offer in the basic forms of compulsory schooling of the future. At a time of diminished intake to teacher training courses it is important that teacher policies be devised that ensure that opportunities remain open for such candidates. Indeed, there may well be a powerful argument that opportunities for such candidates be increased in proportion to those of the young students especially at a time when, due to economic difficulties, many outstanding workers in other callings are finding themselves unemployed and available for teaching. Careful selection from this group may give use to some outstanding recruits to teaching.

Improved Training Programmes

The new requirements for teachers in compulsory schooling that we have already outlined are unlikely to be satisfied merely be enhancing the quantity of candidates recruited. It is clear that the new roles of teachers call for wholly new aspects of teacher training. These will certainly require a far closer links between theory and practice than has often occurred in the past. Teachers will not only need to guide their practice by theory far more fully, they will also need to be able to justify their behaviour with appropriate theoretical backing in a way that has seldom been required until recent years. New training programmes will need to find ways to effectively integrate theory and practice, to make sure that theory is usable. The theory of the new training programmes is likely to be different in many ways from the 'classical' theory that has dominated earlier pedagogic training. It is likely to be generated from the experience of the teacher and the realities of the situation. Above all, it will be devoted to the rational consideration of the classroom. Only in this way can the teacher achieve the professional and intellectual capacity for his new role. In Part IV of this volume : "Analysis of Teacher Tasks in Selected Innovative Schools - General Report", the tasks of the new kind of teacher are described as follows :

"As for the teacher tasks they have been widely diversified and above all are conceived of in a different way from the traditional schools. The planning of the curriculum and of pupils' work is not done once and for all at fixed times. It is changed and modified at all times in order to adapt better to the progress of individual pupils. The preparation and organisation of pupils' work just as much as that of teaching materials have become two essential tasks for the teacher who should take into account the variety of both pupil activity and the teaching materials available for it. Teaching in the narrow sense of the word has given way to the supervision of each pupil's activity and of the use each one makes of the material available. Evaluation is no longer a method of selection or comparison but a means of knowing the pupils and allowing the teacher to guide them better in their learning. Evaluation may sometimes be based on standardised tests but it is also carried out continuously in a much more informal way and is constantly in the mind of the teacher throughout his activity and contact with the pupils. Lastly relationships between pupils and teachers are no longer authoritarian; they are now based on mutual respect and understanding."

Yet in most OECD Member countries, even in some with a basic education covering the whole period of compulsory education, initial training is divided in the same manner as the different cycles of compulsory schooling. Teaching staff are divided into two (and sometimes more) categories: primary school teachers (or the first years of basic school) and middle or secondary school teachers (either teaching in both cycles or forming two separate bodies). Very often such teachers are trained in separate establishments: primary teacher training colleges in the first case and universities or higher colleges of education in the second, often with no link between them.

Recruitment level and, even more, duration and content of training differ, leading in practice to a hierarchy which is reflected in both working conditions and salaries. The primary teacher generally receives a comprehensive training (with the exception of specialised teachers of arts and crafts, physical education, etc. - although in some countries the class teacher is responsible for these too), whereas the teacher in the last cycle of compulsory education usually specialises in one or more related disciplines.

If for good reasons some differentiation is maintained in teacher training for the various stages of compulsory education, it would have to be made as slight as possible and there should be at least some modules common to all future teachers in this field. Similarly, steps might be taken to facilitate their mobility between different levels and cycles. Only in this way can the essential community of compulsory schooling be emphasized and the new roles of the teacher be ensured.

Unquestionably, initial training for all teachers should focus not only on the methods required for the transmission of knowledge but also on those enabling future teachers to adapt themselves and their teaching to the needs of all pupils, to work in a team, to make contacts and to co-operate with the parents and other members of the community and lastly, to know how to use the immediate environment and the various pedagogic resources available to them. The teachers cannot practice a pedagogy of autonomy and participation unless they themselves have been educated in accordance with the same principles. This learning must be based on the methods which they will have to use with their future pupils.

Another question arising in connection with teacher training for compulsory education is that of comprehensiveness or specialisation. While narrow specialisation in a given discipline no longer seems to correspond to the need of an education focussing on overall personality development of the pupil, nevertheless, some sharing of tasks and responsibilities among the members of a teaching team, based on individual tastes and aptitudes, may lead to a better utilisation of teachers.

All societies will be obliged to develop policies and strategies for the initial training of this kind of teacher. One current example is the Teacher Education Project taking place at the Universities of Nottingham and Leicester in England, funded by the Department of Education and Science. Here the emphasis is on classroom practice to develop training procedures and materials in key areas such as mixed ability teaching, class management and control, and language across the curriculum. There will be close involvement with practising teachers engaged in the supervision of students during teaching practice. Enquiries are likely to include investigation into the job of the young teacher, and findings from live observation, interviews and job-descriptive diaries will be fed into the work of development teams.

These and many similar policies to reformulate initial teachers training such as the North American *competency based training* are likely to constitute an essential feature of teacher policies in the coming years. Still further alternatives have been explored by Denmark which has already a unified teacher training system for the whole period of compulsory schooling and by Finland where all teacher training for general education has recently been brought together in the universities.

In-Service Training

It is difficult to see this as a new initiative in teacher policies; most governments are committed to an active policy of in-service training as rapidly as circumstances allow. The new role of the teacher we have described is not just a *changed* one, it is a *changing* one. But if change is to be continuing and teachers are to use their adaptability to respond fully to it, continued opportunity for training and re-training must be available throughout their careers. Takakura (1974), in a report on the Japanese situation, reinforces this point of view and goes on to emphasize the ways in which in-service training must be fully integrated with initial training:

> "In the present, rapidly changing society with advanced technological innovations and increased flow of information, knowledge and technology are progressing at a fast pace. Theories and knowledge regarding the teaching-learning process are also constantly evolving. Amidst such realities there developed an ever stronger idea that teachers should continue their life-long education in their specialised profession so as to promote and assist effectively the all-round growth and development of children. This attémpt to integrate the whole process of teacher training and re-training is inseparably related to the recent concept of the teaching profession."

The rapid changes in knowledge, teaching methods and resources make it necessary for the teachers, throughout their careers, to have the benefit of professional support and possibilities of in-service training and re-training in accordance with their needs. Such training activities should be organised systematically and in the same spirit of co-operation and integration that has been recommended for a new initial training in order to help teachers to adapt continually to the new tasks they have to perform. These activities have all the more impact, in so far as they are based on more thorough teaching practice and experience. They have considerable capacity to be extended to research and development activities including curriculum development.

Teachers' unions and the community at large seem to be agreed on these policies and increasingly recognise not only the need but also the entitlement of teachers to in-service training. In France, this is seen to be the equivalent of one year in the teacher's total career. The rapid change in the social and economic situation in which young people are growing up is in itself a sufficient argument for the continued updating of their teachers after their early training. The need to ensure a flexible teaching course can be powerfully assisted by appropriate patterns of in-service training that will enable teachers to develop new skills and new competencies to meet the changing requirements of their children. The new emphases in compulsory education - the development of core curricula, the introduction to the world of work, the renewed emphases on standards and evaluation - all these are contemporary examples of needs that are most likely to be met by effective in-service training. Indeed it is not easy to conceive of a dynamic and effective teaching force without an adequate provision of in-service training.

It is to be hoped that training resources released by decline in initial training numbers will, at least in part, be used to facilitate this form of professional development. But it would be a mistake to institutionalise in-service training and an important part of policy initiatives in this area will surely lie in the encouragement to groups of schools and even individual schools to develop their own strategies of continuous on-the-job in-service training. Every large school should be encouraged to have its own active programme for the professional development of its staff in ways that respond specifically to its needs and those of its community and its students. The local teachers' centres currently in wide use in Australia, Britain and Ireland can often provide effective support for individual schools in this task. French developments of in-service training too take a localised standpoint. Such strategies have the added advantage of involving practising teachers more fully in the administration of their own in-service training.

VI - NEW POLICIES FOR TEACHER UTILISATION

We have explored new policies for teacher roles and for the ways in which they may be prepared to exercise them. But a further important area for policy initiatives may lie in the conditions in which teachers are employed. The employment of aides, exercise of virement, the possibilities of redeployment are all of considerable relevance in the establishment of teacher policies. Some of the possibilities for initiative are considered in this section.

Changes in certification and conditions of service

At the present time the pattern of professional qualification and tenure in many countries appears to be too specialised, too rigid and perhaps above all, too enduring. It may well be that teacher policies for compulsory education should give appropriate attention to this and, after due consideration and consultation find a way to achieve more flexible patterns of certification and tenure that match the flexible and changing needs of teachers in compulsory education. Is it necessary to offer all teachers a certificate of lifelong validity? At most, surely we should offer only the most outstanding students guaranteed tenure for a life-time of teaching and others, possibly most others, less long-term futures. In this way the turnover of teachers and the turnover of the ideas of teachers may well be speeded up with ensuing benefits to their students who would find themselves working with tutors who are more in tune with the changing nature of the society for which they were being prepared. Is it necessary that so many teachers are trained as specialists so that they are unable to teach other subjects or age groups when needs change? There are many specialists who cannot even be required to re-train when their specialism is no longer needed. It may well be that such a more flexible teaching force could be better placed to withstand the fluctuations of social, economic and demographic change.

At the present time a particular problem of declining teaching forces is that they become increasingly static in membership. Not only are fewer teachers being recruited but the existing body of teachers are likely to remain in posts longer than they may otherwise have done in view of the diminution of viable alternatives within and outside the profession. Another strategy that may well be developed here is some kind of multi-certification whereby teachers may also be qualified to undertake related work in social services and educational administration thereby achieving a greater flexibility of work opportunity and experience with obvious advantages for the work of compulsory schooling.

Virement

A further and more effective prospect of teacher utilisation may lie in the practice virement. This is a concept whereby schools may vary the distribution of expenditure within a total budget. For instance, a school may have the discretion to buy more or fewer books in a system of virement wherein money can be switched from books to science equipment or games equipment or vice versa. The extent of virement varies between school systems but most limit this by specifying "minimum standards of equipment in various areas of their schools". Much rarer is the possibility of virement between materials and equipment and staff salaries, yet it may well be that in some specific areas of compulsory schooling, expenditure on materials and equipment may yield a more effective result than an equal expenditure on teacher salaries. It may well be that teacher policies should now grasp this nettle and create, in appropriately safeguarded systems, the possibility of virement of this kind.

There are some tentative beginnings. Briault (1974) has indicated the prospect of virement between teaching and non-teaching staff:

> "Schools and colleges differ very widely in the curriculum they provide and in the ways in which they set about the task of providing learning opportunities for their pupils or their students. In some schools there may be a readiness to use non-personal learning resources of wide variety; in others there may be an unwillingness to do so. There should, therefore, be the opportunity within the school to consider, not only how it should expend its capitation in terms of materials and equipment, but also to consider that expenditure in relation to the expenditure on non-teaching staff and on teachers. For example, each school should have to consider extensions of its curriculum or the provision of very small teaching groups against the demand that such arrangements make, not simply on teaching staff, but on total resources. The school would then be in a position to recognize and to take decisions about its needs on the one hand for more teachers to provide greater variety in the curriculum (to staff new 'A' level subjects for example), and its desire on the other hand to improve its

clerical and librarian support in the library or its technician support in the science field or the field of educational technology."

Yet even here Briault goes on to indicate the constraints that must surround such virement:

> "The transfer of these powers of choice, and hence of management responsibility, to the individual school or college need not conflict with the final overall responsibility of the education authority for the maintenance of standards. The Authority can, and should, arrange important safeguards. For example, an Authority can lay down a basic minimum teaching staff for all its establishments, and in the school field this may well bear a direct relationship to the quota, as long as that continues. It may wish to lay down minimum standards of office and support staff, nursery assistants in nursery schools and classes, perhaps of technician assistants in laboratories and the like. These too must be regarded as basic staff who must be employed, and of course the Authority has an obligation for continuing employment to those whom it has put on its permanent staff, whether teachers or non-teaching staff."

Yet, even when we heed the proper constraints that Briault suggests, it still remains clear that in the social and economic conditions of the late 1970s, it is almost inconceivable that our educational arrangements should be unable to act flexibly in the distribution of the largest item of expenditure, that of teachers' salaries.

The Early Years of Teaching

Many educational systems are realising that one of the major impediments to the sound development of teachers is the 'culture shock' they experience between leaving their training institutions and establishing themselves in the schools. All too often, teachers at this moment are vulnerable and anxious and are likely to revert in defence to traditional 'safe' patterns of teaching, often encouraged to do so by the cynicism of some senior colleagues in the schools in which they find themselves. Moreover, even with a very well supported induction process, it seems likely that most beginning teachers will continue to be too preoccupied with their immediate problems of personal survival and growth to be able to act effectively in their first year. The challenge is to ensure that their enthusiasm and innovative ideas are encouraged rather than submerged; that their morale is raised rather than depressed. The establishment of Working groups in which beginning teachers are helped to carry through their ideas by working closely with more experienced teachers is one way in which schools may respond.

If the quality of the new intake to teaching and the enhanced work of the colleges are to be maintained, then it is clear that special help needs to be offered at this difficult time and a prime concern of emergent teaching policies must be to find some way of ensuring that, during this induction period, the beginning teacher is given help and reaffirmation so that his contribution to the education of the children is enhanced rather than diminished. Such a strategy is being attempted in many OECD countries through the work of probationary year supervisors, local inspectors and advisers. Generally a process of counselling and where appropriate 'cooling out' should be associated with it. Only in this way can we help to ensure that teachers are likely to 'survive' and not become absentees or other minimal members of the profession.

Teacher Aides

Many of the policies we have mentioned open up a wider range of learning. They also open up a wider range of contacts between the school and the factories, offices, shops and homes of the community. They envisage that other adults shall play a part in teaching both outside and inside the school. But there may also be a place for other adults in a different sense - not only to augment the work of the teacher but to free him to concentrate on those tasks for which his specialised training is essential. Teacher aides may undertake a wide range of duties in the school and in the classroom. Helping with meals, changing, play supervisors, preparing equipment, helping children to read, telling stories - these are all roles currently performed by aides in the schools in many countries. Some indication of the potential of assistants is to be seen in Annex I of :"Analysis of Teacher Tasks in Selected Innovative Schools", **Part IV, which states, page** 142 :

"Although there is no specific information on all the kinds of assistants employed at the different educational levels, it may nevertheless be noted that they are more frequently to be found in infant and primary schools than in secondary schools and that they are increasingly used in special fields : bilingual teaching, children of immigrants or minority groups, special education. Furthermore, their activities vary according to the age and category of pupils with whom they are dealing. As a rule, they spend more time in direct contact with the younger children, but often on material and supervisory tasks, whereas at secondary level their activities are more technical : preparation and maintenance of audio-visual equipment, laboratory apparatus, etc. It is therefore very difficult to sum up the tasks carried out by assistants in view of their great number and variety."

Is it now time to establish aides on a regular 'quota' basis in all schools, but allowing for the fact that such measures might possibly affect the number of teachers to be recruited? The lower cost of aides as compared with that of teachers offers an attractive incentive for such a policy in contemporary economic conditions. The case for employing a wider range of adults in the schools is under consideration in some but by no means all of the Member countries of OECD. Unquestionably, complex and lengthy negotiations will need to take place with the professional teachers in each school and care taken to ensure that the quality of education is not impaired. But the long term attractiveness of an enhanced teacher's role and a wider range of adult experience in the school seem to be compelling reasons to attempt to overcome the difficulties involved in the development of policies in this area.

Retirement

One of the characteristics of a flexible teaching force is the movement of staff within it. At a certain point, movement may become so rapid as to lead to instability; as we have suggested, at a time of economic difficulty, the reverse is likely to occur. It may well be that in the face of an over permanent teaching force, strategies may need to be devised to assist senior staff to retire earlier or to take on some less responsible duties in order to ensure that senior leadership changes hands and younger teachers have a chance to put their ideas into practice at a level beyond that of the individual classroom. It may well be that suitable policies should be devised to facilitate early retirement, voluntary relinquishment of responsibilities and other ways that will ensure a more flexible summit to the teaching profession. Central to any of these strategies is the provision of adequate financial compensations so that no moves from the top may be inhibited by purely economic considerations. Further study of such strategies is urgently needed in more Member countries.

VII - FINANCIAL IMPLICATIONS

The areas of teacher policy that have been outlined in the paper are, of course, but an incomplete list and surrounding them are a range of policy changes that intimately affect the work of teachers in compulsory education. Matters concerning the size, distribution and organisation of schools, class size and teacher pupil ratios, specialist provision for special categories of students, building and resource programmes, the development of pre-school and post-school education; all these and many more are properly the subject of other initiatives by OECD.

Underlying all considerations has been the question of costs. Many of our suggestions for policy initiatives involve additional expenditure. These include the employment of teacher aides such as clerical workers, technicians, documentalists and librarians, the further utilisation of multi-media learning and the extension of the teacher's working day. More generally the remuneration of teachers may need to be more closely linked to the nature and responsibility of the tasks envisaged. The redefinition of training, qualification and tasks must surely be accompanied by appropriate redefinition of reward. In-service education, too, represents a major new financial commitment. Similarly, the enhanced level of initial training we envisage has important implications for the cost of such provision. The higher status of professional training at all levels is unlikely to be achieved without higher costs.

We argue, however, that such additional expenditures contribute an investment which will not only pay dividends in the results of compulsory schooling but will also in the middle and long run, stabilise or even reduce costs. Indeed, in many cases, our recommendations have been couched in a manner that would allow additional expenditure to be offset by lower costs in some areas. Such balancing expenditure might include:

- altering old premises or building new ones better suited to facilitating innovations at lower cost;
- purchasing technological equipment which might replace teachers for certain educational tasks:
- training and use of persons other than teachers who are generally less highly qualified as teachers and therefore less expensive for routine and non-professional tasks.

It is the experience of many Member states of OECD that substantial development in social services can be undertaken within static rather than expanding budgets. The compulsory education of a stable economic state does not itself have to be stable. It is increasingly common to emphasize the complex inter-balance between all social expenditures, noting for example that it is likely that, if educational expenditure is cut, social welfare costs may rise.

VIII - TRANSITORY MEASURES

Even though the feasibility of the new teacher policies has been strongly and regularly emphasized it is important to reaffirm that this document is one that is realistic rather than utopian; that it is recommending policies that can begin to take effect almost immediately. To make this point it may be useful to remind readers of measures that could at once be put into train in the Member countries. These include:

1. Where possible,
   the gradual reduction of the differences between the various cycles of compulsory education. Much may be achieved here with little financial outlay. In France, in the framework of the Haby reforms, measures have been taken to strengthen the links between the last year of the primary school and the first year of the secondary school. On the one hand, pupils in the last year of primary (CM2) will be introduced to the kind of work and teaching methods which they will find in the first year of secondary (6th). Arrangements will be made to welcome them and to help them adapt to their new school. On the other hand, there will be a "harmonisation of teaching" between the two levels of schooling. In particular the teachers in CM2 will attach to the reports of pupils entering 6th information about the nature of the class, the kind of school work and possibly about "parts of the syllabus where pupils seem shaky". Teachers in 6th will for their part send a a copy of the term reports to the teachers in CM2 and will "comment on the achievements and the difficulties they have observed". In the same way exchange visits between schools and shared activities between pupils

in 6th and CM2 will be encouraged. Lastly primary teachers will devote one of their periods of in-service training to the problems of the move from primary to secondary school; similar activities will be recommended for teachers in the first cycle of secondary eduction.

2. A parallel linkage between roles of teachers in the various sectors through the gradual integration of initial training, reinforced by planned in-service training in which teachers from all sectors are brought together to discuss common tasks. The economic necessity to redeploy teachers between sectors in some OECD countries may valuably reinforce such linkage.

3. Active consideration of the redeployment of teachers and the further introduction of aides. Again French initiatives are relevant here. It is pointed out in a recent French report(1) that in one month, ten hours' collective classes for 120 pupils, plus 32 class hours in small groups of 15, plus 30 hours' interviewing and individual counselling, would not cost any more than 72 hours' conventional classes, allowing 18 hours (service obligation of one teacher) per class of 30 pupils. Yet this would allow some progress in the direction of individualisation of the teaching provided.

4. Discussions with the teachers' professional organisations on the strategies for the adoption of such new roles and tasks and the ways in which they may be introduced. Here it must be remembered that modifications to the traditional structure of teaching will have implications for the structure of teachers organisations themselves in many OECD countries.

5. Exploration of local initiatives in curriculum and pedagogical development in individual schools and also in local communities where students, parents and employers may engage in the discussions.

6. The initiative of discussions with teachers and all others concerned with compulsory schooling on improved ways in which the new approaches may be assessed: the ways in which the work of teachers and students may be evaluated and the results communicated to a wider public. The development of techniques of self evaluation is particularly important here.

---

(1) Report of the Commission d'études sur la fonction enseignante dans le second degré (1972). La documentation française, Paris.

There is no reason why, in most Member countries, such activities should not at once be added to the current agenda of teacher's policy implementation. The OECD report Education Policies and Trends, Paris, 1977, valuably augments the full discussion of such an agenda.

IX - CONCLUSION

Inevitably, some of the indications for teacher policy in this report have been built upon assumptions rather than firm evidence. Not all aspects of life are accessible to empirical enquiry. We have assumed that teachers can and do act professionally and do not need close supervision and direction in order to undertake their new roles. We have assumed also that they are highly capable rather than the reverse. We have assumed however that in the new situations they will need generous support from administrators, professional unions, parents and the community at large to give of their best that compulsory schooling is part of a social contract. We have assumed that there is no single 'right way' for compulsory education rather that there is a multitude of right ways between which teachers, parents, students, employers and all others concerned with compulsory schooling must choose. And such choices must be exercised within broader policy goals - policy goals that determine the kind of society that is sought and the kinds of life style that may exist within it.

But despite the assumptions and constraints we believe that our recommendations on policy are for the most part not only firm but unavoidable; that the initiatives that we have outlined in this paper are inescapable if compulsory schooling is to have the teaching force it needs for the 1980s. They are policies that are essential if planned and coherent development is to take place in response to the changing social and economic conditions that have been outlined. Such policies not only respond to the needs of young members of our future societies, they will also enable the schools to maintain their established and valuable place and to fulfil more completely their fundamental and vital tasks within these societies.

REFERENCES

"Analysis of teacher tasks in selected innovative schools - General Report" and "Annex I : Utilisation of personnel other than teachers, especially assistants in schools" (Part IV of this volume). (This study is based on a series of case-studies).

Bourdieu, P. and Passeron, J.C., 1970, La Reproduction, Paris, Editions de Minuit.

Bowles, S. and Gintis, H., 1977, Schooling in capitalist America, London : Routledge and Kegan Paul.

Briault, E., 1974, Allocation and management of school Resources, London, Council for educational technology.

Byrne, E.M., 1976, The Rationale of resource allocation, Milton Keynes, Open University press.

Eggleston, J., 1977, The sociology of the school curriculum, London, Routledge and Kegan Paul.

Eggleston, J., 1977, The ecology of the school, London, Methuen.

Japanese contribution to the international Seminar on Compulsory secondary education : problems and possibilities. The compulsory secondary education period in Japan, OECD, Paris, 1976.

Jencks, C., 1972, Inequality : a reassessment of the effect of family schooling in America, London, Allen Lane.

McMullen, T., 1976, The lower secondary stage : problems and possibilities, Paris, OECD, Mimeo.

New Zealand contribution to the international seminar on Compulsory secondary education : problems and possibilities, OECD, op. cit.

Norwegian contribution to the international Seminar on Compulsory secondary education : problems and possibilities, OECD, op. cit.

Portuguese contribution to the international seminar on Compulsory secondary education : problems and possibilities, OECD, op. cit.

Sharp, R. and Green, A., 1975, Education and social control, London, Routledge and Kegan Paul.

Swedish contribution to the international seminar on Compulsory secondary education : problems and possibilities, OECD, op. cit.

Takakura, S., 1974, "Innovative trends in teacher training and retraining in Japan" in New Trends in Teacher Education in Canada and Japan, OECD, Paris.

PART FOUR

ANALYSIS OF TEACHER TASKS IN SELECTED INNOVATIVE SCHOOLS

GENERAL REPORT
by the Secretariat

SUMMARY OF MAIN ISSUES

The schools covered by the case studies practise the following types of innovation: in secondary education, in England, participation in the administration of the school and the personalisation of pupil learning; in Belgium, "reformed secondary education" offering the pupils more options and applying a less rigid control system; in Norway, the "open school" associated with teacher teams and greater pupil participation in the choice of their activities; in primary education, in England, the "integrated day" or the thematic approach to curricula; in the United States, "open teaching" aiming at making pupils acquire knowledge and skills through various facilities and activities; in the Netherlands, "world orientation" enabling pupils to discover themselves by discovering the world around them.

All these innovations have certain common features: the emphasis placed on pupil learning, individualised or small group learning and the possibility for pupils to progress at their own rate, the variety of teaching methods and teaching materials, a pluridisciplinary thematic or project approach and the development of the pupil's whole personality. However, such teaching approaches are usually taken further in primary schools than in first-cycle secondary schools where the teaching of main subjects often still depends on structured curricula leading to school-leaving examinations decisive for the pupil's future.

Teacher tasks are diversified and above all are viewed differently than in schools of a more traditional nature. Planning of curricula and pupils' work is no longer decided once and for all at regular intervals but is modified or changed as the activities proceed in order to adjust better to each pupil's progress. Preparation and organisation of pupils' work and of teaching aids have become two of the main tasks of the teacher who must take account of the variety of activities in which pupils are engaged and the diversity of teaching aids to be made available to them. Instruction in the strict sense has lost some of its importance, giving way to the participation of the teacher in the learning process of pupils during their different activities and the use they make of the various aids. Assessment is no longer regarded as an instrument of pupil selection or comparison, but as a means of getting to know each pupil and enabling the teacher to guide him better in his learning process. While assessing is sometimes done by means of standardised tests, it is also always much more informal and remains a constant concern of the teacher throughout his activities or during his contacts with pupils. Lastly, teacher/pupil relationships have lost their authoritarian character, giving way to mutual respect and understanding.

The teacher's role in the school has also changed and he is often associated much more than previously with the management of the establishment and with decision-making concerning school life. Similarly, the teacher no longer works in isolation; he belongs to a team grouping all persons concerned in the pupils' learning process and among whom he can, if need be, find help and support. Within this team the role of the head teacher is of paramount importance. Lastly, often the teacher is no longer the only adult in the classroom, but works with assistants, other categories of personnel and parents.

His relations with the outside world have become wider; he seeks to integrate the school with the community by encouraging pupils to participate in extra-school activities as well as to make parents and the community understand the general philosophy of the school and the methods used and to persuade them to take part in their implementation, in particular by opening the school and the classroom to them.

In order to succeed in these new tasks, the teacher must be able to accept the pupils as they are and to lead them to be responsible for their own learning; to guide, stimulate and take part in their learning; to work with other adults and communicate his aims to them, and lastly he must at the same time be capable of greater autonomy and recognise his own limitations.

As the initial training received by most teachers either does not prepare them or prepares them badly, for the tasks they have to perform and is not based on the teaching approaches they have to use or the relationships they have to establish, they feel a deep need for in-service training organised either inside or outside the school and taking account of their specific needs and experiences.

Initial learning itself should be reformed to equip future teachers to deal with their new tasks.

I - INTRODUCTION (1)

Up to the present, most of the Secretariat's activities in the general context of teacher policies have been mainly based on theoretical considerations - whether or not backed by practical examples - rather than on direct observation of reality. These considerations concerned in particular the processes of change (2) and the development of the role to be played by teachers when faced with situations geared towards pupil learning rather than teaching activities (3). Similarly, the effects of such changes on teacher tasks had so far been approached from the outside only (4). This is why, at this stage, it seemed useful to go inside the school itself and into the classroom in order to study how these tasks were changing and were affected by the different teaching approaches used and by the new targets assigned to education.

Experts from various countries were therefore asked to attend teaching sessions and to confer with the heads and the teaching staff of one or more selected schools which had adopted and applied innovatory teaching methods (5). These schools are therefore not necessarily representative of all establishments at the same level in the country concerned - and still less in other countries - and no generalisation can be drawn from the repercussions that the introduction of various changes may have had on the life of these schools, since the form of an innovation depends both on the personalities of teachers and other staff categories and on the environment in which they are working. Finally, as the number of case studies completed was necessarily limited, other types of change - such as those based on technology or the general use of teacher teams - which may have different implications for teacher tasks, have not been taken into consideration. These schools, however, are by no means isolated cases. On the one hand, they all come under the State educational system, or in the Netherlands' case, under the Catholic system which covers a large number of institutions. As a result they are controlled to a certain extent by the broader system to which they belong, and it is easier for their results to influence other schools in the same system than it is for private schools which have also introduced new teaching methods.. On the other hand they are representative of types of innovation currently applied in other schools in the countries concerned, albeit to varying degrees and with varying success.

---

(1) Terms such as "innovative", "innovatory", etc. used in this report imply no form of value judgement. They are used, on the one hand, because they have passed into everyday speech, particularly in the educational field and, on the other, because they succinctly define the various qualitative changes introduced with a view to develop the system.

(2) See in particular the four volumes of "Case studies of educational innovation: I. At the central level; II. At the regional level; III. At the school level; IV. Strategies for innovation in education", CERI/OECD, Paris, 1973.

(3) See in particular The teacher and educational change - Vol. I: General Reoort, OECD, Paris, 1974.

(4) See in particular New patterns of teacher education and tasks - General Analysis, OECD, Paris, 1974.

(5) As opposed to that of other schools, the case study on secondary education in England was carried out by a member of the teaching staff who had been at the school since its inception and had participated in the initiation and evolution of these innovations.

The case studies presenting the results of these enquiries were based on the guidelines prepared by the Secretariat, a copy of which will be found in Annex II, but mainly focussed on the various teacher tasks. The case studies relate only to compulsory education as legally defined in the various countries. They are concerned on the one hand, with secondary education, and, within this period, where appropriate, with only those years corresponding to the end of compulsory schooling: Countersthorpe College in England (editor Mrs A. Corbett, based on a study by Mr M. Armstrong); the Athénée Royal, Gembloux, Belgium (author: Mr C. Javeau); the first-cycle secondary school, Landøya, Norway (author: Mrs B. Brock-Utne); and on the other hand, with primary education: four in England (authors: Mr P. Gammage and Mr C.J. Woodhead); two in the United States (author: Mrs D. Levin) and the Sacred Heart nursery and primary school in the Netherlands (authors: Mr W. van Velzen, Mr C. Verbeck and Mr J. Arts)(1).

The purpose of the present report is to amalgamate these case studies and to determine their main lines and any common points which might especially influence initial and continuing teacher training. After briefly presenting the characteristics of the schools observed and the pupils attending them, we shall describe in rather greater detail the characteristics of the innovations and the aims pursued, the teaching approaches adopted, the various tasks that teachers have to do both with a view to pupil learning and in relation to the various components of the teaching/learning process, the skills which they need most in order to establish a new relationship with the pupils and with other teachers and adults concerned, and which initial and continuing training might help them to acquire or develop.

---

(1) The interest shown in these studies has encouraged the Secretariat to issue them under the same general title : Teacher Tasks in Innovative Schools/Tâches des enseignants dans les écoles innovatrices and to disseminate them separately in three volumes in their original language :

Volume I : Primary schools : United States, Netherlands, United Kingdom.
Volume II : Compulsory secondary education : Belgium, Norway, United Kingdom/Enseignement secondaire obligatoire : Belgique, Norvège, Royaume-Uni.
Volume III : Utilisation of teacher aides in some European countries and the United States.

II - CHARACTERISTICS OF THE SCHOOLS AND THE PUPILS

These characteristics have been grouped together in the following brief description, which gives an overall view of the different schools studied (1) Except on certain points, these schools do not differ much at first sight from what we might expect from institutions at the same level (apart from school No. 1 in the United States, which is located on a military base). First, the frequent use of assistants and parents inside the classroom and the presence in three primary schools (two in the United States and one in the Netherlands) of specialists whose task in the first school is to develop curricula and teaching aids, in the second to organise parent and community participation in the life of the school and in the third to help teachers acquire the necessary outlook for achieving the aims of the innovation. Secondly, pupil evaluation is usually less formal than in many other schools and their end-of-school guidance is based less on academic results alone. In the absence of cohort studies or special surveys, it is difficult to ascertain what effect innovatory schooling has on the pupil's academic future. Nevertheless, one can observe that, in the schools under review in the Netherlands and Norway, where studies lead to a diversified secondary education (first or second cycle), a greater number of pupils are channelled towards academic study than the average observed at national or local level. Finally, in certain cases, the style of teaching adopted by the school attracts pupils from outside the normal catchment area.

---

(1) The study on Countesthorpe College is not included in the table as it contains very little detailed information on the characteristics of either the school or the pupils. It should be noted, however, that it is an upper secondary school taking pupils who have completed 3 years' first-cycle secondary schooling and who either wish to complete their compulsory schooling (14 to 16 year olds) or wish to continue their studies until the age of 18/19 years. Countesthorpe is also a "community college" with courses for adults, generally during the evening but also, to an increasing degree, during the day.

CHARACTERISTICS OF SCHOOLS AND PUPILS

Characteristics of the school	Belgium	Norway	England				United States		Netherlands
			School A	School B	School C	School D	School No. 1	School No. 2	
Level	1st cycle secondary (4 years)	1st cycle secondary (3 years)	Primary "infant" classes (3/3½ years)	Primary "junior" classes (4 years)	Full primary (7 years)	Primary "junior" class (4 years)	Kindergarten and first 3 primary years (4 years)	Kindergarten and elementary classes (9 years)	Nursery school (2 years) Primary school (6 years)
Situation	Small industrial town	Wealthy Oslo suburb	Bristol suburb	Bristol suburb	Village near Bristol	Country town near a city	Military base	City	Medium-sized town
Number of pupils	472	289	270	280	223	205	330 in primary	About 225	139 in primary
Teaching and other staff	1/3 university graduates 2/3 from middle-level teacher training colleges 1 teacher acts as co-ordinator in the teaching of Germanic languages	28 teachers, of whom 12 part-time (generally ½)	8 teachers, parents and voluntary helpers	8 teachers 1 part-time assistant 30 volunteer parents	8 teachers	6 teachers 1 principal teacher and 2 part-time teachers	Assistants and specialists in curriculum development and teaching aids	Volunteer parents Co-ordinator of participation by parents and the community in school life	Consultants fro the educational advisory services
Pupil evaluation and guidance	According to the stream, guidance into vocational training or second-cycle secondary (5 options)	Marks based on tests during the year. School-leaving examination: 60-65% go on to the academic branch of second-cycle secondary; 3-5% leave the system; the remainder go out into the vocational training branches	All pupils go to the neighbouring "junior" school	All pupils are directed to the neighbouring comprehensive school	All pupils to to the local comprehensive school	All pupils go to the local comprehensive school	No marks Descriptive report on pupils' progress	Standard tests unless refused by parents	Head teacher's opinion and test for guidance into secondary education: 85% go on to classical and modern education, 15% int vocational trai training
Characteristics of pupils: Age limits	12-15	13-15	5-7/7½	7-11	5-11	7-11	5-8	5-13	4-11
Educational origin	Primary schools in the town and its district	Primary schools	Few nursery schools in the neighbourhood	Neighbouring "infant" school	No nursery schools in the neighbourhood	Adjacent infant classes	Varies in view of the school's situation on a military base	-	-
Geographical origin	From the whole region	From the neighbourhood	From the neighbourhood	From the neighbourhood	From the neighbourhood	From the neighbourhood	From the military base	From the entire city (racial, ethnic, economic quota)	From the entire region
Social origin	Lower middle class, tradesmen, clerical workers, civil servants	Upper middle class	Craftsmen and semi-skilled workers	Manual workers, skilled craftsmen and clerical workers	Manual workers and occasionally lower middle class	Middle class and lower middle class	Military personnel on the base	Variable, many pupils having had educational problems	Middle classes 15 per cent of the parents hav had a higher education

III - CHARACTERISTICS OF THE INNOVATION

It is useful here to present, in some detail, the changes introduced into each of the schools under study, for, if there are some elements common to them all, each school has, nevertheless, its own particularities which have repercussions on the tasks of the teaching staff.

1. Secondary schools

(i) England: participation and personalisation of learning

The school, opened in 1970, was built expressly to house new teaching methods, even if the methods now developed there are somewhat different to those for which the school was originally constructed. In the same way, the principal and the major part of the original teaching corps were chosen because of their new ideas and their enthusiasm for innovation. The basic principle is that the pupils can only learn if they are motivated to do so, which implies a radical change in the relations between teachers and pupils. The objective is to develop to the maximum the potential of each pupil and to lead him progressively to a point where he is able to take responsibility for this development. The curricula, the inter-personal relationships, the teaching/learning methods and the internal administration of the school are all planned to this end.

(a) The curricula draw on the basic disciplines - science, arts, literature and social science - which each pupil aged 14 to 16 is encouraged to include in his study scheme, as well as academic, artistic and practical options (in other English schools at this level almost all subjects are optional). Pupils also have a large degree of autonomy in their choice of subjects. In order to reconcile this autonomy with the basic curricula, the tutoring and teaching activities - normally separate - have been combined and a team system set up. 5-8 teachers responsible for 100-150 pupils form a "team", which is subdivided into "tutored" groups, made up of 20-25 pupils for each tutor. The tutors spend at least half the week with the pupils in their team in a place reserved for them, so forming a semi-independent mini-school within the school. The tutors work with the pupils on a variety of activities and, in particular, help them draw up a balanced study programme, covering, where possible, all the basic disciplines. The pupils generally spend the rest of the week with specialised teachers from outside the team, but this division of time into two equal parts is not always so rigid.

(b) The relationship between teachers and pupils is based on "conversations" by which means they get to know each other and to identify their mutual interests. These relationships are much less formal than previously and have lost their authoritarian character.

(c) The teaching methods are based on the suppression of grouping by level, except for modern languages and to a lesser extent for science to take account of the examination for which pupils are studying. Teaching to a class as a whole is unusual and has been replaced by teaching in groups of various sizes, usually 1-7 pupils. The organisation of space and the use of teaching aids permit a wide variety of educational approaches.

(d) The internal administration of the school is based on participation. The teaching staff, as well as those pupils who wish to, participate in the "Moot" (Governing board of the school) at which school policies, normally the sole responsibility of the principal, are discussed. The "Moot" empowers sub-committees to study specific problems.

Countesthorpe College is one of the upper secondary schools created in the County of Leicestershire since 1957, when the County Council established a vast programme of reorganisation of secondary education, dividing upper and lower secondary schools and transferring pupils from one to the other at the age of 14. Countesthorpe has gone further than other schools of the same level in the development of innovatory methods. It was, in particular, the originator of the team system and has attempted to apply to a secondary school the methods and approaches used in the most innovative English primary schools.

(ii) Belgium: "reformed secondary education" [enseignement rénové]

"Reformed secondary education" has been in force since 1969 in the Athénée at Gembloux after which it became general practice but lost certain of its more innovating aspects. It succeeded better at Gembloux because the Prefect of Studies there was one of its most ardent promoters. The underlying principle of secondary education reform was to offer pupils a variety of options around a common core in response to their choice and capacity and thus to introduce more democracy into the processes of social selection. It was less a case of implementing new teaching methods than of asking teachers to adopt a new frame of mind towards school and pupils. In practice this took the form of (a) replacing the marking system by permanent monitoring of learning, (b) replacing the traditional examinations by the discussion of each pupil at a class council, although an examination in the main subjects has been restored at the end of the third stage ("reformed secondary education" comprises three stages of two years each; the case study concerns only the first two, which are part of the compulsory schooling system), (c) introducing individual remedial tuition for backward pupils, (d) team-work and (e) a great variety of options which in theory enable the pupil to try various subjects during the first two years before making his choice between the different streams at the second and third stages.

In practice, the streams available usually depend on the category to which the school initially belonged before "reformed secondary education" was introduced (technical, classical, etc.) and tend to reproduce the old divisions of traditional education in spite of the above-mentioned teaching changes. "Reformed secondary education" makes no provision for pupil participation in the preparation of curricula, or for integrating the school in a broader socio-cultural context.

(iii) Norway: Open school

Open school does not automatically mean open teaching. The staff - including the head teacher - at Landøya had the advantage of being the first, in 1972, to work in this new school and to discuss together the type of activities and relationships which they wished to see established in "their" school on the basis of the ideas set out in the Curriculum Handbook for Norwegian basic schools compiled by the educational authorities.

They decided to lay emphasis on the need of both pupils and teachers for security, their independence, co-operation between teachers and between pupils, methods of acquiring skills and methods of finding information. These aims have been translated into practice in the form of a reorganisation of the teaching/learning process:

(a) each pupil has his own "home base" at school, he has a group of friends of different abilities with whom he works and plays and he comes into contact with only a small number of teachers who cover several subjects and to whom he can relate positively;

(b) the teachers, instead of working in isolation as in most other first-cycle secondary schools in Norway, co-operate closely and form teams;

(c) the whole staff share the administrative responsibilities, especially the decisions as to daily routine and the organisation of the school day;

(d) the pupils help to prepare the curricula and to organise activities, and as a result the time devoted to project work has been increased.

What differentiates Landøya from other schools which have introduced various new teaching methods in the context of the Curricula Handbook and the Nine-year Education Act is the enthusiasm and optimism which prevail among the staff and which have enabled greater progress to be achieved in implementing the targets of official educational policy.

2. Primary schools

(i) England: the integrated day - a general expression covering a great variety of thematic and project approaches to curricula in the course of which the pupils learn the necessary basic skills in the three Rs (reading, writing, arithmetic), resisting the traditional school day spent in studying different subjects separately.

- School A

The principal aim is to offer pupils a maximum choice in order to increase their motivation. They are encouraged to find information for themselves; the curriculum is sufficiently flexible to suit each child's needs. Pupils are quite at liberty to develop their individual abilities and talents and - even the youngest - have all the necessary equipment and instruments at their disposal. The work is organised in specific tasks. Pupils are encouraged to go outside the classroom and to organise their own work.

The teaching centres around themes which are studied for about 5 or 6 weeks in each case and include all the "normal" subjects. All the teachers take part in this approach on the initiative and with the help of the head teacher who has notified parents in writing of the school's special style: no special daily routine, a large number of activities taking place in the classroom at the same time, great freedom of choice left to the children.

- School B

The thematic approach is similar to the one adopted in school A, but parents are much more involved in the activities of the school, which pursues an "open door" policy towards them in which they are associated with the teachers in the actual classroom. Pupils are encouraged to learn from each other and to try and discover things by themselves both in and out of school, thus making school an integral part of the local community, and to evaluate their own performance.

- School C

The approach here is the same as in the two preceding schools but seems to be applied less systematically. The principal innovation is the recent creation of a resource centre containing a large quantity of aids other than in book form, which are used by the pupils, but above all by the teachers, in preparing the themes to be studied. The head teacher - who is new to this school - plays an important role in the organisation and choice of activities, but the specific aims of the themes and methods used have not yet been exhaustively discussed with the teachers.

- School D

In addition to theme work, this school applies vertical grouping to a certain extent (pupils of different ages working together). The study of mathematics and English is separate but all the other subjects are integrated in the thematic approach. There is no general timetable except for the use of joint facilities (physical education, music, etc.) and the head allows the staff every latitude to choose their own teaching style.

(ii) United States: open teaching, which in practice involves several of the following factors: individual teaching, teacher teams, use of assistants in the classroom together with a large number of volunteer parents, informal methods of evaluation, elimination of the notion of school years and grouping of different ages. At one extreme open teaching may lead to practices very similar to those met with in the traditional schools but with greater individual choice for the pupils and more individualised equipment. On the contrary, it may allow the pupils complete responsibility for their own learning process. The schools covered by the case study lie between these two extremes.

- School No. 1

Because of its situation on a military base, this school has very special problems. Pupils come and go throughout the year and do not stay for more than an average of two years. However, there is a very strong feeling inside the base of belonging to the same community. The school's main target is to give the children a sense of security and to prepare them to adapt to the new situations which they will have to meet in the future.

Owing to the pupils' wide variety of educational experience and level of knowledge, the teaching is very personalised and the pupils play an active role. The teachers develop their own equipment and activities with an eye to each pupil's requirements. They do not mark school work but write descriptive reports on the pupils' progress and frequently discuss these with them. Two-thirds of the pupils with two or three years' schooling are grouped in the same class so that, inter alia, they have the same teacher for two years. Finally, some teachers work in teams and assistants take part in classroom teaching. In this school, changes have been introduced by a few teachers and gradually applied by an increasing number, thanks in particular to staff participation in the recruitment of new members.

- School No. 2

Contrary to school No. 1, this school was created in 1972 on the initiative of parents, educators and other members of the community who wanted more progressive teaching than that offered by the town's other schools. It began with the nursery classes and then gradually expanded to cover all the school years up to high school entrance (second-cycle secondary education). It takes a large number of children who have had serious learning problems in the traditional schools they attended previously.

As the teachers, staff and pupils began the experiment together, there was initially some disagreement as to the aims in view. The first tendency was to allow the pupils a great deal of freedom which they were not always ready for. The situation has gradually cleared up and the school is operating well.

The innovatory characteristics are similar to those observed in the preceding school: no standard curriculum, no marks or formal tests (unless parents so desire), individual tasks assigned to pupils, classes grouping two or three school years, teachers remaining with the same pupils for more than a year. The difference, however, is that the parents are much more directly involved in running the school. They are represented in the Committees which recruit staff, assess teachers and draw up the school rules. Many of them help regularly in the classroom. A post has been specially created to co-ordinate and guide their participation and that of the community in the life of the school.

(iii) Netherlands: World orientation

The basic principles of this innovation are contained in the article entitled "World orientation" issued in 1969 by the Committee on Primary Education of the Association of Catholic Teachers and may be summarised as follows:

- the child at school is brought into contact with the world around him;
- the teacher is the supervisor of this contact;
- the aim of the school is to approach the acquisition of knowledge and skills from a learning angle.

It is therefore necessary to adopt a new teaching approach and really bring the child face to face with the world so that he discovers both the world and himself. The teacher's main task is thus to create situations which are most conducive to this confrontation, having regard to each child's needs and possibilities and especially his age. At the pre-primary age, the child reacts mainly through his emotions, but when he starts school he is attracted by external realities, which he tries to understand and to get to know. During the last years of primary education he is anxious to acquire knowledge and arrange it in order, realising that he can have his own opinions and exercise an influence on the outside world.

The teaching/learning situations in which the aims of "world orientation" may be achieved can be divided into:

(a) "discussion" situations, during which teachers and pupils talk and listen to each other;

(b) "observation" situations, in which emphasis is laid on observation of animals, objects, pictures and events;

(c) "research" situations, during which emphasis is laid on the collection of material in the documentation centre or elsewhere;

(d) "action" situations, in which emphasis is laid on some form of action or contact with other people;

(e) finally, for the youngest children, "play" situations, which blend the various aspects mentioned above.

This particular school was chosen among others pursuing the same objective as it has for several years been using the methods and procedures developed by the Catholic Teaching Centre to help schools apply the principles of "world orientation" with the help of local advisory services.

IV - TEACHING APPROACHES

Whatever the type of change introduced in the various schools described above, it always has an influence on the teacher's approach. In all cases the general atmosphere in the classroom is much more relaxed than in the traditional school: the pupils generally move about freely, speak to each other and help each other, and the teachers seldom remain in the same place. This is due, first, to the physical arrangement of the classroom. It is rare for the pupils to be seated in rows, except sometimes when the teacher is introducing a new subject.

./.

As a rule, the classroom is divided into small work spaces which are often fixed, each pupil having his own personal "home base" but more often vary and are chosen according to the teaching sequences and the pupils' activities. The teacher may himself decide the grouping which best suits a particular situation or allow the pupils to organise themselves on their own and to settle down where they like.

This freedom of movement is also necessary since many activities are usually taking place at the same time, and this involves the use of a variety of teaching aids. These aids may be directly available in the classroom and arranged in some more or less structured form according to the type of activity or the subject of study. They may also be stored in a documentation centre placed under the responsibility of a specialist or a teacher or may be kept in the corridors, under the staircases, etc. All the schools appear in fact to make a special effort to use every inch of free space for teaching purposes. Thus pupils do not stay put in the classroom but go and look for the information wherever it is located. The accommodation in these schools is usually formed along traditional lines, i.e. they are divided into separate classrooms. The Norwegian school is, however, the only one which has an open area where the pupils can work together around the resource centre in the middle, while school No. 1 in the United States has classrooms separated by movable partitions, thus facilitating joint activities. Finally, the architecture of the English secondary school encourages work in small groups or individually and its circular arrangement reduces the communicative distance. Documentation may also be sought outside the school, either during excursions and visits or in the various community centres.

Finally, since they mostly work in small groups or on individually assigned or personally chosen tasks, the pupils need to communicate with each other and to have "free access" to the teacher, who should be able to give them the help they need (whether in terms of knowledge or of encouragement).

However, it appears that in certain cases the pupils and teachers tend to stick to a fairly traditional pattern of classroom organisation which is not always consistent with the activities they are pursuing. For example, in the study of "integrated day" experiments in England, it has been noted in the "infant" classes that the children tend to remain in the place assigned to them at the beginning of an activity and that the teacher frequently stays in the middle of the classroom from where he can call the pupils in order to check their work. Similarly, the head teacher of the Norwegian school had to encourage teachers and pupils to try out new forms of grouping since the younger ones, in particular, retain the habit of sitting in rows one behind the other even when they are doing individual work yet at the same time trying to communicate with each other.

Even when the pupils have great freedom in the choice of activities, they are always expected to do a certain amount of "work" either per day or over any other period, and all activities are organised in such a way as to enable them to acquire learning and communication skills, usually in an informal way. In all the schools an amount of time varying according to the case and the pupils' age is reserved either for the acquisition of basic knowledge in the three Rs (reading, writing, arithmetic) for the youngest children or in mathematics, mother tongue and usually foreign languages for first-cycle secondary pupils, as the teaching of these subjects is still often governed by prescribed curricula. But while the teaching of these subjects is more structured, as a result of their own logic, the methods and materials used are generally much more varied than in traditional schools. In addition, theme-based or project activities are organised in such a way as to allow the acquisition of basic knowledge.

The rest of the time pupils work either on their own or in small groups, or on rarer occasions all together on a theme or project of their choice, sometimes on the basis of their own experiences or as proposed by the teacher. The scope and duration of the project vary according to the schools and/or teachers. Similarly, its development and any changes made at the pupils' instigation largely depend on the freedom allowed by the teacher and his ability to take the pupils' views into account. In every case, however, the activities aim at leading pupils to become responsible for their own learning, to acquire knowledge through varied information sources, including the teacher and the other pupils, and various materials, and to work with others.

The organisation of the school day and the activities involved varies according to whether the children are at the infant and primary school stage or in the first-cycle secondary period.

(i) Infant and primary school children

As a rule, the whole class meets in the morning when the children arrive. Sometimes the teacher will have prepared the material aids he wishes to use beforehand and arranged the seats in a particular way. During this meeting, the teacher describes the day's activities, distributes tasks which are chosen according to the level of knowledge of the different groups or of each pupil and describes the results he expects from everyone.

In England, the first part of the day for the youngest children is often devoted to "work" (the three Rs) but includes play sessions and the use of a variety of teaching aids. For the rest of the time, activities are organised around a theme

1 4 6

whose adaptation to pupils' individual abilities depends a great deal upon the teacher's imagination and personality. The acquisition of skills, particularly reading and writing, is also included in these activities. In the case of older pupils (eight years and above), work activities and thematic activities are more closely mixed - no doubt because the pupils have now mastered the 3 Rs - and they sometimes spend several days on independent research on various aspects of the theme and on their development.

In the United States, the day is divided into "quiet" periods devoted to specific activities (reading, arithmetic) and free periods during which the pupils choose among various activities bringing them many practical experiences. In the two schools observed, but especially in the second, the pupils have a considerable say in the choice of activities and themes for study. In the latter school, too, the teachers take less notice of the national age norms at which, for example, pupils have to learn or know how to read, and each pupil can adopt his own pace.

Finally, in the Netherlands, the teaching approach differs according to whether the teachers are dealing with children between four and eight years of age or older pupils. In the case of the younger ones, two types of activity are organised. During the "play" activities, the pupils use all types of material aids in and out of class and the teachers are mainly there in order to observe their individual behaviour and their attitudes towards one another, to help them change the aids or to end a game and to give them any encouragement needed. Theme-based activities always begin with the children's immediate environment and experience. The theme is so chosen that the child can identify himself with it and it creates observation, action, discussion and research situations. According to the stage of development of the various situations, the children work together or in small groups.

Activities for the older pupils are also organised with a view to creating the same types of situation but oriented in such a way that the pupils can develop methods of abstract thought, acquire a wider vocabulary, appraise the experiences with which they are confronted more objectively and work together.

(ii) Secondary level pupils

In the three countries studied - as in most OECD countries - this level of education corresponds to the end of compulsory schooling. The pupils are therefore either preparing to enter working life or, in most cases, to go on to second-cycle studies, but in the different streams or with the different options on which their access to higher education so greatly depends. This is no doubt why the teaching approach is in some cases more traditional in the "main" subjects than in the others.

The teaching approach used in the English secondary school is certainly closest to that used in the innovatory primary schools, particularly as regards the integration of the various subjects. Though the pupils are encouraged to include all the basic disciplines in their study scheme, this is never done in an authoritarian way and within these disciplines they have a wide choice of teaching aids and progress rates. In the same way, although their time is divided between team activities with their tutor and activities with specialist teachers, the difference is above all in the type of relationships formed between pupils and teachers, and in the way in which the activities are organised. In the team activities, the pupil works in his own direction whereas in the specialised activities he works at his own speed but the teaching methods, the use of resources and the methods of assessment are relatively similar in both cases. In addition, the teachers in charge of the teams and the specialist teachers try to work in collaboration, and each takes into account what the others do with each pupil.

During the team activities, the teachers encourage the pupils to acquire a sense of autonomy and to take responsibility for the development of their intellectual faculties and of their entire personality. They therefore have to try to get to know each pupil as well as possible, by talking to him and working with him on a wide range of activities. Depending on the activity, the teachers can either teach their own specialist subject, follow the pupils and help them in a project chosen by the children themselves out of personal interest, or work with them in a field unfamiliar to all. The frontiers between academic and personal tasks, the subjects and disciplines, the work and the free activities, the teacher and the taught, tend to become blurred under such conditions. The teachers try to involve the pupils in community work (in nursery or primary schools, hospitals, old people's homes) so as to widen the field of their activities and give them practical experience. They endeavour to encourage the children to use this experience in a more general context, and to complete it by the use of other sources or of other information, adding to it personal feelings.

On the other hand, the work with the specialists outside the team framework is centred rather on the acquisition of knowledge and technical skills in a precise discipline. But here again the knowledge and skills are presented in widely differing ways so that they can be taken in by each pupil, according to his personality and his own rhythm. There is a growing tendency, in fact, to integrate "specialised" teaching into team teaching.

In the Belgian school studied, the introduction of reformed secondary education mainly changed the relationship between the teacher and the pupil, the latter now being left the initiative for the way in which he wishes to acquire knowledge in the different subjects. The teacher must therefore get the pupils to formulate and ask questions themselves and to find the answers from various sources (people or materials). The pupils are also encouraged to work in teams. However, it appears that this approach is mainly used in this school for the study of certain subjects, especially French, and that the incorporation of several traditional subjects in the same theme is hardly practised at all. The absence of co-ordination between teachers in the same field and/or between teachers in different fields is also much regretted by the teachers who are most receptive to change. It should be noted, however, that this school has a co-ordinator for the teaching of the Germanic languages, which is a fairly rare phenomenon in Belgium.

The first-cycle secondary pupils in Norway share their time between studies on a project incorporating several subjects and the more traditional learning of mathematics, Norwegian and English (the three written subjects which may be covered by the official examination at the end of the 9th year of schooling). Project work, which generally concerns a theme chosen by the pupils, is usually carried out in small groups generally formed by the teacher, as those formed by the pupils themselves tend to be too homogenous. In the case of a larger-scale project, the group may consist of forty-five to fifty pupils working with their team of three teachers. In fact, one of the main changes introduced in this school is to have combined pupils from three ordinary classes under the responsibility of a team of three teachers (each of the three teaching a main subject - mathematics, Norwegian or English - together with other subjects), which permits pupils to work with teachers having different abilities and personalities and to have a deeper relationship with them and therefore a feeling of greater security. The subject for study may be introduced by one of the teachers, by a parent or by a pupil, and it is generally extensive enough for each small group of pupils to study one of its aspects. Finally, the whole school takes part twice a year in projects lasting a full week. The pupils are grouped vertically according to their centre of interest and can choose between a great many courses (32 in the project entitled "Let's get to know our community"). These courses are all connected with the principal theme and comprise visits to firms, museums and historical sites and interviews with members of the community. Each pupil has to undertake to follow the course of his choice for six hours a day.

The teaching of written subjects is much more structured and begins with simple concepts, gradually building up to the more complex ones. The teachers generally work with groups of

12 to 15 pupils so as to establish easy relations and then give them specific tasks to do during the week. All pupils (45-50) meet for 2 to 3 hours a week in order to work on these tasks together under the supervision and with the help of their team of three teachers. They do the easiest part of this work at home.

The same characteristics - in varying degrees depending on the circumstances and on the teacher's personality - may be found in all these schools: the emphasis is much more on pupil learning than on the teaching provided; the communication is centred on the pupil but is usually guided by the teacher, who is responsible for the nature and quality of the classroom learning; the pupils acquire knowledge and skills in different ways (the teacher being only one source among many others) but the process is more structured in certain subjects, especially in the first secondary cycle; the organisation of knowledge is neither clearly defined nor strictly laid down in advance (with the same reservations as above) and is usually interdisciplinary.

V - CHANGES IN TEACHER TASKS

The specific aims of the innovations and the various teaching approaches described above have brought about changes in the scope and importance of teacher tasks, including both those involving direct relationships with the pupils and those concerning school life and relations between the school and the community.

1. Teacher tasks in direct relationships with pupils

(i) Planning the curricula and the pupils' work

Since most teaching and learning activities are organised around a theme or a project and since they have to be adapted to pupils' individual development and abilities, the teachers spend much of their time in and out of school in planning them. However, curricula may be more or less dependent on decisions taken outside the school, especially when pupils have to prepare for an examination or to acquire certain basic knowledge. Even then, the teachers rarely plan day-by-day and in separate instalments.

Activities may be planned in several stages. The main basic themes to be studied in a particular term are generally chosen during the school holidays (England) or in school at regular intervals (in Norway, teachers spend a great many hours on this task twice a year). Then, throughout the term and as activities progress, the teachers - either alone or in teams -

have to adapt, modify or change the plan which they had set themselves. Teachers in the English primary schools consider that they spend between four and five hours a week on this aspect outside school in addition to the time spent (about half an hour per week) in discussing plans with other members of staff, including the head teacher, and the day reserved once a year for discussing the school's general objectives and any changes or innovations to be made in curricula. In Norway, each teacher team reserves two hours per week for planning the team's work, and all teachers of the same subject also hold joint meetings. In the American schools, in addition to the time teachers spend in preparing and planning curricula for general projects, they also devote part of their time to planning individual or small group activities for the acquisition of basic knowledge in reading, arithmetic and English. Certain teachers have chosen to put pupils' new tasks straight into their exercise books, relating them directly to activities under way and to each pupil's personal interests, and in this way they become familiar with new teaching aids and keep constantly abreast of each child's needs and progress.

Apart from the help of the head and his colleagues, a teacher may sometimes obtain the assistance of specialist personnel for his planning tasks. For example, in the Netherlands, the planning and development of themes are carried out in close collaboration with the Catholic Pedagogic Centre, which is responsible for the "world orientation" projects. In other cases (England, the United States), teachers can consult their colleagues specialising in music, art and physical education on how to fit these subjects in with the pupil's activities. But this inevitably creates problems as these subjects are generally programmed and taught separately, and the pupils therefore have to interrupt activities in which they are engaged. Many teachers would like the specialists in these subjects to pay more attention to what happens in the classroom and to co-operate more closely with them. Finally, in the two American schools, people are specially recruited to take responsibility for the development of activities or the necessary teaching aids. Teachers call on them when they need new ideas and/or new teaching aids either for launching a new project or for developing a project under way. Their role may go from that of being simply consultants to that of acting as educators taking a direct hand in encouraging teachers to find other teaching methods.

(ii) Preparing and organising the pupils' activities and the material

The Secretariat's guidelines for the case studies dealt separately with the preparation of the pupils' activities and the utilisation of teaching material. In most of the schools observed no highly sophisticated teaching material is used and owing to the teaching approach used in the various schools, the pupils' activities cannot be isolated from the teaching material they use in the course of these activities. These two tasks are therefore closely linked.

As they are no longer the only source of knowledge, teachers feel less obliged to be able to answer all the pupils' questions than in traditional schools. Their task in this field consists much more in guiding them in their search and in learning at the same time as they do. On the other hand, the pluridisciplinary approach leads them to tackle subjects outside the scope of the discipline(s) they studied during their own training. This not only means that the must read the documentation and experiment with the material specific to these subjects, but also that they must find people outside who are most qualified to inform them and/or come into the classroom in order to give the pupils the benefit of their experience and knowledge.

Next, the teachers prepare the material needed for the pupils' activities. Even when they have resources and resource centres at their disposal in or out of school, they themselves make some of the material so that they are more suitable to pupils' individual aptitudes and to the activities in which they are engaged, whether the work relates to a theme or a project or more directly to the acquisition of basic knowledge. The teachers may thus have to devise work sheets or exercises for slow pupils as well as to put together partitions or platforms for the plays put on by the children. The author of the case study on the United States mentions carpentry as one of the talents required of certain teachers in the exercise of their profession.

Lastly, since several activities are generally going on in the classroom at the same time, the teacher supervises their organisation and makes sure that the materials needed for each activity are available. He takes care, especially if he is dealing with young children, to see that both the classroom and the teaching materials are arranged in such a way as to arouse the pupils' interest and provide a stimulus in their activities. He also ensures that activities proceed on the right lines, that the children are not interrupted in their progress or in their work. He looks for ways of extending activities, for example, by introducing new teaching aids or organising new points of departure for projects: excursions, visits to museums, the zoo etc. He also organises the timetable throughout the day and varies the activities, alternating "work" with "play". He seeks to avoid conflict and persuades the pupils to work together, and induces them gradually to organise their learning process and find their own information. The extent of the teacher's tasks of preparation and organisation depend on the pupils' stage of development and their individual differences and also on the nature of the activity and/or subject dealt with, the teaching aids available, and the teacher's own personality.

(iii) Instruction and participation in activities

As previously mentioned, in most of the schools studied there is still some distinction between the learning of basic subjects and "play", "theme" or "project" activities; though in fact both written and oral communication skills are expected to be learnt through the latter. Actual instruction is generally more structured in the first case, but even then the methods used are fairly informal. If instruction sometimes takes the form of a lesson for the whole class or a larger group of pupils, it usually consists either of a means of introducing a new aspect of a subject or project, or of a discussion, more or less guided by the teacher, between himself and a small group of pupils. Lastly, instruction no longer depends solely on written documents but also uses various teaching aids produced commercially or made by the teacher. This category also includes the assignment of specific tasks which the pupils have to carry out every day over the whole week, or over a more extended period.

In "free" activities, instruction is even more informal and the teacher's task consists mainly in participating in pupils' activities and helping them to progress. There are various methods of learning: all pupils use the same prefabricated aids (made commercially or by the teacher) but each uses them at his own pace; this assumes that the same knowledge and/or skills can be acquired in the same way by everyone. More often, however, the pupils have the choice between various types of aids in order to arrive at the same results. In this last case, the teacher must not only watch over the efficient utilisation of aids but also seek, together with the pupils, both inside and outside the school, the aids and sources of information which will best stimulate their progress and, where necessary, create new aids. In English secondary schools teacher-tutors also look outside the school for those places where practical experience can best be obtained (schools, hospitals, etc., willing to welcome pupils as observers and participants). They keep pupils in their work by listening, encouraging and suggesting but, above all, by taking their pupils' suggestions into account. In this way pupils not only actively participate in their learning process but become directly responsible for it. Joint teacher/pupil learning can lead teachers to re-examine their conceptions of the problems under study, to review the set study programmes and to look for new aids. Finally, the teacher must see that the pupils - whatever activities they are performing - make the most of their experience, not only in the learning process but in their subjective and emotional development, and in their ability to communicate, cooperate and live in society.

(iv) Assessment

In all the schools observed, the teacher's task is firstly, to keep abreast of what the pupils have learnt, sometimes on the basis of standardised tests but very often informally, and secondly, to follow their development in order to know them better and be able to help them with their learning. Even in first-cycle secondary schools where pupils will ultimately have to choose between various options - going on to more or less diversified studies or leaving the school system - assessment loses its function of selection to become a means of guidance taking into consideration the overall personality of the pupil.

The teacher is therefore constantly collecting information about his pupils and it is difficult to separate assessment from the teacher's other tasks since it takes place all the time, not only in occasional conversations and group discussions but also in the course of more structured activities. He does it not only when he moves around the classroom and organises or participates in activities but also when he speaks to the pupils and answers their questions or when the pupils discuss their activities together or show the work they have done. He can sometimes lead the pupils to assess themselves through the way their classmates react to their work, even though generally all forms of comparison between pupils is deliberately avoided. In certain cases, especially in the basic subjects and/or for pupils in the final years of primary schooling, self-correcting aids are used, thus relieving the teachers of some of the tasks which as a rule they regard as most restricting.

Methods for keeping a check on individual progress vary. Certain teachers take very few written notes but observe the children throughout the day and use their observations to plan follow-up activities for them. Others, on the contrary, spend several hours a week in keeping individual files containing information on each aspect of the pupil's development. However, especially in some first-cycle secondary schools, teachers still devote a considerable part of their time to setting, correcting and marking tests or examinations in the "main" subjects. The abolition of the traditional marking system does not always go smoothly. In Norway, for example, teachers who had experimentally abolished marks for the social subjects and natural science, were obliged to restore them under pressure from parents. In English secondary schools, however, assessment is made during discussions with individual pupils or between teachers. The teachers keep a diary in which they note the work done by the pupils, their judgements on their work as well as the progress made in assiduity, acquisition of skills, enthusiasm and general intellectual comprehension. Even when, in particular for those activities carried out with specialist teachers, a notation system is used, assessment is made on the basis of the past progress of each pupil and not on pre-established norms.

Methods used to ensure continuing assessment or to encourage pupils to practise self-assessment take up much of the teachers' time and are a source of uncertainty to some teachers because it is much more difficult for them to assess their pupils' progress in specific terms. On the other hand, these methods help them to get to know the children better, not only as pupils who have to assimilate a certain sum of knowledge but also as individuals who are constantly developing in relation to the teacher and to others.

(v) Personal contacts with pupils

Here again, there are no institutionalised methods or special times for establishing personal contact between teachers and pupils. They each form a community of people who respect each other, work together and share the same experience. Such contact is all the closer when teachers and pupils join together for "trips" outside the school (excursions, visits to firms or museums) and for the preparation of extracurricular school events (entertainments, exhibitions of pupils' work). This relationship does not in any way mean - as certain critics sometimes fear - that the teachers renounce their status of adults and exercise no control over the children, for whom they are and feel responsible.

Control is exercised over each individual child, bearing in mind his or her particular personality, or over a group of pupils, much more than over an entire class.

VI - OTHER TASKS

While teachers in innovating schools generally have very varied tasks, they are also very often involved in the life of the school and the community.

(i) Administrative and management tasks

The number of administrative tasks which teachers have to perform - in both traditional and innovating schools - depends mainly on the school's additional specialist or other staff resources. Thus, in Norway, the teachers and pupils have to do certain clerical work themselves, as the school has only one secretary. In the English primary schools, the teachers consider that they spend an average of 30 to 40 minutes a day on minor administrative tasks (filling in attendance sheets, ordering supplies, answering parents' questions, etc.) and every day two of them spend 20 per cent of their time at the school in supervising pupils outside the classroom, mainly during recreation periods.

On the other hand, teacher participation in the management of the school is considerable - in varying degrees - and takes on a variety of forms. For instance in the English secondary school, teachers participate in meetings of the Governing Board ("Moot") where all decisions relating to the life of the school are taken. Furthermore, each tutor is responsible for all aspects of the administration of his group. He keeps the attendance record, regularly meets the parents, supervises the pupils' timetables, is responsible for their school and career guidance as well as disciplinary questions. In Belgium teachers participate in the class councils which meet four times a year and not only discuss each pupil's progress and decisions concerning his immediate future at the end of the year, but also deal with teachers' problems. In Norway, the teacher teams decide how to organise their timetable and that of the pupils - except for special subjects (domestic economy, art subjects, physical education) which are taught in separate rooms - and discuss these questions at staff meetings. In addition, the head teacher, contrary to usual practice, has decided to give teachers the right to propose new candidates when a post falls vacant or is created. In the United States, the teachers in school No. 1 participate in choosing their head, in appointing and evaluating other teachers, in allocating the budget and other resources, and in decisions concerning the school's teaching policies and regulations. Routine decisions are taken at meetings held once a week, those concerning more important points (organisation of workshops for in-service training, preparation of a syllabus for a particular area of study, definition of new school targets, etc.) being taken after examination by, and recommendations from, a committee of teachers set up specially for this purpose. However, the head tries to ensure that the only problems presented to his staff are those which directly affect their teaching and the life of the school and which he cannot solve himself without encroaching on their autonomy. The teachers in school No. 2 are involved in almost all the major or minor decisions concerning the operation of the school and continue to create and experiment with new administrative structures and to establish a system of relations between the school and parents. Moreover, the latter take a direct part in the internal management of the school.

(ii) Contacts with other adults

(a) with other teachers

Except in the Norwegian school, teachers do not work systematically in teams - perhaps because the layout of school premises is hardly suitable - but they have many more or less formal contacts with each other. In addition to regular meetings held at the instigation of the head teacher in order to plan or prepare pupils' activities - see above paragraphs on these tasks - teachers meet frequently to discuss day-to-day problems, the development of current activities, the materials used and to talk about their pupils. The staffroom is often a favourite place for such discussions during free periods. Some teachers would however like to have more time to exchange ideas. As a general rule they have more contacts with each other than teachers in traditional schools and no doubt have a stronger feeling of belonging to the same community and pursuing the same objectives.

(b) with other categories of personnel

All the cases studied stress the importance of the role of the head teacher and/or his relations with his teachers. He is at one and the same time the administrator who knows his teachers' needs and supervises the smooth running of the school, often the innovator who encourages discussion on current practices and efforts to devise other teaching techniques and methods, and the intermediary between the school and the educational system, especially when it comes to defending any new approach adopted.

Apart from specialist personnel (responsible for developing syllabuses or material for teaching subjects such as music, art and physical education), whose role is mentioned in the paragraphs concerning curriculum and activity planning, and specialists for children suffering from speech and reading difficulties, with whom they collaborate closely, teachers very often have the help of assistants (1). The extent of the tasks entrusted to the latter varies a great deal and depends especially on their number. If they are few, the tendency is to keep them for purely administrative and clerical tasks. In other cases, they also take part in classwork and their functions then depend on their capacity (certain of them are sometimes recruited for their special abilities), the teacher's requirements, the degree of freedom he allows them and the age and activities of the pupils. Teachers and assistants may jointly decide the tasks the latter are to be assigned but in any event the teacher retains full responsibility for their utilisation and organises and co-ordinates the tasks assigned to each.

Some of these schools are also used in the practical training of student-teachers from neighbouring teacher training colleges, which enables the teacher to compare his ideas on the running of his class and his opinions on the pupils with those of another adult who has the same interests but a more "detached" view. As the student-teacher gains experience and can be given more responsibility in the classroom, the teacher has more time to devote to aspects he feels are important or to pupils with special problems. Lastly, if the teacher is thinking of becoming a teacher trainer himself, this gives him the opportunity for developing and testing his abilities.

---

(1) See also Annex I on "The utilisation of personnel other than teachers, especially assistants, in schools".

(c) with parents

The teachers try to establish a close relationship with parents, partly to ensure that the latter are fully informed of the school's general philosophy and objectives, and to overcome an occasional reticence on their part towards methods so far removed from those they knew as children, and, partly to persuade them to play an active role in their own children's learning process and even to participate in the work of the class. Above all, teachers seek, through their relationships with the parents, to better understand the pupil and his family environment.

This relationship is established at official meetings between parents and teachers. More informal meetings occur at the beginning of and during the year and these may include discussions over a pupil's special problem. There are also the detailed reports which the teachers send parents at specific times concerning their child's progress and development. Steps are often taken to show parents either in groups or individually the pupils in their daily work in the school.

These relations are rather similar to the contacts established in the course of a traditional schooling although they would seem to be more frequent. On the other hand, direct participation by parents in teaching is more unusual. In England and the United States, in particular, parents are not only invited to visit the classroom but to take part in activities and to help the teacher on a regular basis. In certain classes, not a single day passes without one or more parents being present. Their role is to help the teacher to prepare or make teaching aids, organise excursions, supervise small groups of pupils in certain of their activities, etc. Workshops for parents are sometimes organised by the teachers in the evenings or during the weekend in order to brief them on the school's objectives and the methods used. In American school No. 2, parents have even been trained to help the teachers to evaluate the quality of the teaching/learning process taking place in their classrooms.

(d) with the community

Teachers frequently establish relationships with people outside the school to give their pupils greater opportunities for learning. In the English secondary school in particular one of the teacher's jobs is to encourage his pupils to join in outside activities and thereby helping them to meet those people who are prepared to welcome pupils and facilitate their learning. Teachers may also take direct steps to bring home their teaching methods to people outside the school. They may represent the school on local, regional or national education committees and endeavour to explain and sometimes defend their innovating practices. Teachers from certain schools may organise workshops in or out of school for other teachers and administrators in order to discuss the various aspects of a current innovation. In addition, "open door" operations sometimes take place during which other members of the educational system or the public may visit the school and ask questions about its outlook and methods.

(iii) Personal development

The great majority of teachers - if not all - have been trained in the traditional way and in order to teach according to traditional methods. They are therefore constantly constrained to create new working methods and adjust to new situations which are often very different from those they have previously experienced. They therefore feel a great need for in-service training, more particularly related to the tasks they have to perform inside and outside the classroom. Such training may take several forms. It may consist of refresher courses offered by the teacher training colleges, the universities or other institutions but may also include ad hoc arrangements inside the school designed to meet the specific needs of its teachers. Consultants sometimes come for a certain period to help teachers with their classwork; or seminars on particular themes or areas of study or teaching methods and practices are organised with the help of consultants or teachers from the school itself who have special experience or expertise. In some schools new teachers or those experimenting with important innovations receive special assistance from consultants, the head teacher and their colleagues. Informal evaluation methods in which the head teacher and other colleagues take part together with the teacher concerned help in analysing the teaching approaches adopted and encourage the teacher to go on and broaden his experience. This procedure is much better than the practice of dogmatically announcing that one or other method is good or bad. Similarly, the exchange of ideas between teachers and other categories of personnel contributes towards the development of all parties concerned and encourages them to be constantly critical of their own work.

VII - TEACHER ABILITIES

All the case studies draw attention to the abilities most needed by teachers in the performance of their various tasks. They may be briefly summed up as follows:

(i) In dealing with his pupils

The teachers need to know how to adapt their teaching and their expectations to the personality, needs and abilities of each pupil, and therefore they need to be familiar with the different stages in the development of children in general but able to detect individual differences and take account of them when deciding which teaching strategy to adopt in each case. They need to accept the challenge to their traditional authority and allow the pupils gradually to become responsible for their own learning and to help choose and organise their own activities. They need also to agree to delegate part of their responsibilities to them. They need to judge the pupils not according to pre-established criteria but to take their development as a whole into consideration and find the best means of evaluation in order to help them to know the pupils better and guide them more effectively in their learning process. Lastly, and above all, they need to establish with them relations based on mutual respect and understanding.

(ii) In dealing with other teachers and other adults

The teachers need to be receptive to discussion, capable of considering and taking account of views other than their own; they need to accept criticism and compare their ideas and experiences with those of other people facing the same problems, for they have fewer models to follow than the teachers in traditional schools. They need to have the necessary sense of compromise for working in a complex organisation. They need to know how to communicate their aims, distribute tasks and delegate part of their own tasks other adults (assistants, parents, student-teachers, etc.) working with them and for whom they are responsible. They need to arouse the interest of parents and the community in what is happening in the school and lead them to take part, they must therefore have a more democratic relationship with them, respect local customs and social and cultural differences, and here too accept discussion and criticism. Lastly, they need to develop the feeling of belonging to a community of other teachers and educational personnel, parents and other adults concerned in the pupils' development and learning process.

(iii) In facing his own problems

The teachers need to endeavour to broaden their field of knowledge so that they can guide their pupils in their choice of activities, while always being prepared to recognise their own limitations. They must experiment with new methods and new educational material, knowing that a solution which is valid for a given situation is not necessarily so for another.

They need to evaluate the results obtained and take them into account in creating new situations. They need to be capable of autonomy and independence since most of the decisions taken in the classroom depend on them and they are the ones which mainly affect the pupils' learning process and their development. They must set their priorities and limits in order not to be overwhelmed by their numerous tasks. Lastly, they need to regard themselves as agents of change responsible for the success and development of the teaching methods inside the school and **their dissemination outside.**

VIII - IMPLICATIONS FOR TEACHER TRAINING

The tasks of teachers in schools using new methods are so diverse that it is neither possible nor desirable to define an ideal type - much less an ideal content of training to prepare them once and for all for the exercise of their profession, as traditional training appeared to imply. This does not mean that his initial or in-service training does not influence the way in which the teacher performs his duties. On the contrary, it should prepare and help him to train himself throughout his life and to fulfil himself as a teacher, individual and member of society.

If initial training is to prepare teachers for their new tasks and develop or inculcate the abilities they will need in exercising their profession, it should reflect the pedagogical practices they will have to employ. While it should still enable them to acquire knowledge in their chosen field, it should avoid narrow specialisation and develop their curiosity and a global approach to problems. It should also lead them to discover and use a variety of methods of work and evaluation and teaching materials, rather than teach them techniques valid for all situations. Lastly, it should teach them to work and co-operate with other people whose horizon is sometimes different - starting with their pupils - and especially to establish a new style of relations with them. It should therefore enable them to acquire not only theoretical knowledge on children's development but also practical experience during school assignments and/or by encouraging them to take part in organised activities for young people (holiday camps, youth clubs, etc.). It should develop in them a feeling of security by training them to analyse their own reactions. It should be organised so that student-teachers have an opportunity to work in groups of different size engaged in various activities (preparation, planning, teaching, etc.) inside the establishment itself and during practical assignments. Lastly, it should sensitise them to parent reactions and attitudes and to the lifestyle and history of the surrounding community.

In-service training is particularly important for promoting and perpetuating change. It helps traditional-minded teachers to become more innovating and it also supports teachers more open to change in their experiments and helps them in their efforts to devise other innovations. But if they are to be really effective, such training programmes must take account of the needs and interests of the different categories of teachers and allow them to play an active part in planning and developing activities and to use the experience they have acquired in their own classrooms. Training activities organised more or less formally inside the school itself are particularly important in helping the teacher to solve his day-to-day problems.

IX - FINAL REMARKS

In most OECD countries more or less advanced educational experiments are in progress and while there are no completely innovatory schools, there are no longer any completely traditional schools. As stated in the introduction, the schools covered by the case studies are not representative of all these types of innovations - each innovation having its own originality - nor of all schools practising the same type of innovation - each school having its own style. It seems however that these studies do indicate certain conditions which are likely to promote the success of the innovation and certain obstacles that may hamper it, and that both the former and the latter can be applied to other innovations and other schools.

In the first place, the teacher no longer works in isolation. He is a member of a team - which does not necessarily imply working with other teachers in the classroom - sharing the same general philosophy with regard to pupils' learning and within which the role of the head teacher is often of paramount importance. The feeling of belonging to a team also encourages the teacher to compare his ideas with those of his colleagues and to find among them the assistance he needs, especially if he is a new-comer to the profession or the school. The presence in the school - permanently or temporarily - of specialists in curriculum development or teaching aids for example, or the possibility of consulting them outside, helps the teacher particularly to adapt or modify his teaching approach and methods, which implies that he has a certain autonomy.

The teacher's working conditions must enable him to individualise his pupils' learning and have frequent personal contacts with them. For this, it is desirable, on the one hand that he be relieved of some of his less professional duties both inside and outside the school, and on the other hand that he should have access to enough teaching aids to be able to adapt them to the level and specific abilities of each pupil. This does not necessarily mean that the use of large quantities of different teaching aids - particularly those of an elaborate nature - is, in itself, a condition of change.

Out of school the teacher must be able to rely on the support and understanding of parents and the community, and one of his tasks is to make them receptive to the development of teaching methods and lead them to participate in school life.

Lastly, the teacher must have the time and the opportunity for continuing his own training either inside or outside the school.

However, even if the school offers the most favourable conditions for change, obstacles may be encountered outside it. In highly centralised countries where schools are subject to excessive controls and directives by the administration, changes are often more difficult to introduce than in countries where each school and each head teacher enjoy a certain autonomy.

It also seems that first-cycle secondary schools (or the last years of compulsory schooling) are still dependent, more often than primary schools, on pre-established curricula - at least in certain subjects - which are in turn limited to school-leaving examinations. This makes the adoption of new teaching methods more difficult.

Similarly, service obligations varying according to teacher qualifications and the separate learning of certain specialised disciplines (music, art, etc.) do not encourage team work and the overall planning of pupils' work.

Introduction of changes into schools sometimes encounters a lack of understanding on the part of the teaching staff and the population - in particular parents - who consider that they must inevitably lead to a lowering of the educational level and a relaxation of discipline. Such a critical attitude may, however, be useful in discouraging schools and/or teachers from experiments which may be harmful to their pupils.

As tasks of teachers multiply and become more constraining, they sometimes feel unable to respond adequately to all demands. Some of these tasks, in particular the evaluation of pupils' progress, may generate some uncertainty in them. It is then essential that they should be able to find within the school the help they need in order to persevere in their innovating attitudes.

Lastly, the training which teachers have received and often still receive does not prepare them adequately for adapting to their new tasks, for making these evolve and for becoming themselves the main agents of change.

ANNEX I

UTILISATION OF PERSONNEL OTHER THAN TEACHERS, ESPECIALLY ASSISTANTS, IN SCHOOLS

INTRODUCTION

It seemed useful, in the context of the case studies on the profiles of teacher roles and tasks as related to overall learning resources, to reserve a special place for the utilisation in schools of categories of staff other than teachers. This is in fact a question on which relatively little is known and which has aroused controversy especially among teachers' associations.

Two case studies have therefore been prepared. The first written by Mr Jon Lauglo, of the University of London Institute of Education, concerns a number of western European countries: Germany, Norway, Sweden together with three areas of the United Kingdom, i.e. Scotland and more especially England and Wales. The second, whose author is Mr Alan Gartner of the New Careers Training Laboratory, New York, discusses the situation in the United States. Both case studies give details of a number of experiments to which the present amalgamated report, attached as an annex to the general report on the profiles of teacher roles and tasks, will merely refer where necessary.

On the other hand, the report will endeavour to determine the common features of these studies, especially as regards: the reasons for using assistants (1), their tasks and activities, their training and recruitment, their influence on the pupils' learning process and their relations with teachers. The Secretariat's guidelines for the case studies had also included a study on the utilisation of "specialists" (i.e. people receiving a special training in order to carry out specific functions in the schools: socio-medical, guidance or technical functions, etc.). No doubt because these categories of personnel, and especially socio-medical and guidance staff, are rarely attached to a single school, particularly when it is small or medium-sized like those generally selected as examples in the case studies, little or nothing is said about their utilisation.

---

(1) The word "assistant" should be taken in a very general sense. Thus, it covers a great many people called by different names, from the "dinner lady" to the assistant teacher carrying out certain tasks normally falling on teachers. Furthermore, the same assistant may - and in most cases does - perform a wide variety of tasks. In his case study, Mr. Gartner has preferred the word "paraprofessional" which is more commonly used in the United States.

On the other hand, the guidelines had recommended the exclusion of personnel specialising in teaching certain categories of pupils, e.g. rehabilitation staff, teachers of reading, specialists in the education of ethnic and racial minorities, etc. This somewhat arbitrary decision does not appear to reflect the actual facts. For instance, the case studies show that schools taking a high proportion of pupils with special problems use assistants more frequently and give them a much wider variety of tasks closer to those of teachers than schools with a "normal" population. This finding is all the more important at a time when most OECD Member countries are tending to integrate handicapped or maladjusted children into the ordinary classroom.

REASONS FOR USING ASSISTANTS

Assistants were introduced into schools at first for economic reasons. The aim was to use less expensive personnel than teachers (the monitorial system in the United States over a century ago), to make up for the shortage of qualified teachers (one of the aims - side by side with the more directly educational aim of the Swedish IMU programme for individualised mathematics teaching, where two teachers and one assistant do the work of three teachers) and to make more efficient use of the material and human resources of schools, especially teachers.

Many surveys have in fact demonstrated that teachers spend a by no means negligible part of their time on "non-professional" tasks. For example, a study on "the teacher's day" carried out in 1969 in Surrey, England, revealed that a teacher devotes about 23.6 per cent of his total work time to "control and supervision" and to "clerical and mechanical" tasks. A survey on primary schools in Scotland concludes that an assistant could be usefully employed for about 30 per cent of the time spent in the classroom. Research on this problem has also been carried out in Sweden, where it was estimated that teachers were occupied with "certain service activities" in and out of the classroom for 18 per cent of their time in the lower stage of the basic school (three years) and for 20 per cent in the middle and upper stages (three years each).

Similarly, a survey on assistants in state schools in Minneapolis (United States) asked teachers how many hours they could devote, thanks to the utilisation of assistants, to planning and preparing activities and to direct work with the pupils. The answers varied, but the average was around 17 hours per week.

However, the use of assistants or other outside personnel, salaried or otherwise, also emerged as a means of introducing teaching reforms and changing the teaching style in the classroom; of bringing pupils into contact with adults other than teachers; of improving the adult/pupil relationship and finally of establishing closer links between the school and the community. The Plowden Report published in England in 1967 already considered that assistants should be the "extra pair of hands" needed by the teacher if he is to use informal methods. One of the aims of the Bavarian pilot project on the utilisation of teaching assistants in a growing number of schools is to facilitate teamwork and individual learning. Finally, the participation of assistants in teaching children who are handicapped or underprivileged or from linguistic or ethnic minorities is regarded as a priority in many countries.

TASKS OF ASSISTANTS

Although there is no specific information on all the kinds of assistants employed at the different educational levels, it may nevertheless be noted that they are more frequently to be found in infant and primary schools than secondary schools and that they are increasingly used in special fields: bilingual teaching, children of immigrants or minority groups, special education. Furthermore, their activities vary according to the age and category of pupils with whom they are dealing. As a rule, they spend more time in direct contact with the younger children, but often on material and supervisory tasks, whereas at secondary level their activities are more technical: preparation and maintenance of audio-visual equipment, laboratory apparatus, etc.

It is therefore very difficult to sum up the tasks carried out by assistants in view of their great number and variety. They may, however, be classified in six categories, ranging from those farthest-removed from teaching proper to those involving a more or less close teaching relationship with the pupils. These categories are not of course mutually exclusive and in most cases assistants perform tasks in several categories, as shown by the job descriptions presented in the case studies:

1) "Maternal" and "domestic" tasks

These were among the first tasks entrusted to assistants and most of them take place outside the classroom. They consist, first, in helping the children - especially the younger ones - in their day-to-day activities: dressing and undressing, finding anything they have lost, attending to minor injuries, consoling them, accompanying them to hospital or taking them home when they are ill and, secondly, keeping the premises in order. These tasks are very similar to those performed in France by "femmes de service" in nursery schools, but in England, for example, they are often only part of the activities of assistants.

2) Administrative tasks

In schools of a certain size, specialist clerical staff are often recruited for these tasks but in other cases they may be entrusted to assistants who also have other functions (for example, according to the pilot survey carried out in Norway, assistants devote 45 per cent of their time to clerical work and only 20 per cent to helping teachers in teaching situations).

3) Material/mechanical tasks

These may consist both in distributing the usual school supplies (books, pencils, answer forms, etc.) and in preparing, maintaining and sometimes operating more sophisticated apparatus (audio-visual aids, equipment for scientific experiments and for manual and artistic work).

4) Supervisory tasks outside the classroom

These tasks are also varied and include supervision in the dining room (the "dinner ladies" specially recruited in English schools), in playgrounds, on outside visits or excursions, and during individual and leisure activities which the assistants can organise themselves (included among the recommendations of the Swedish SIA Commission).

5) Supervisory tasks in the classroom

These may consist simply of invigilating at examinations, tests and exercises and supervising pupils doing practical or artistic work, etc., or if more active methods are used, of taking charge of a group of pupils performing a task prescribed by the teacher while the latter is busy with other pupils (for example, the "auxiliaries" in Scottish primary schools).

6) Teaching tasks

Even where the assistant always works to instructions given by the teacher, he has much more responsibility towards the pupils. For instance, he can hear the younger ones in their reading and ask them questions, evaluate the progress made by pupils, set standard tests (evaluation of pupils' answers as compared with pre-established answers, as in the individualised mathematics teaching programme (IMU) in Sweden), teach pupils to use workshop equipment, organise the work of a group on a specific project chosen by the teacher with the more or less active participation of pupils and, finally, in extreme cases and particularly in teaching children with special problems (handicapped, from poor homes or from linguistic or ethnic minorities), take complete charge of a pupil or a group of pupils under the more or less close supervision of a teacher (see, in particular, the activities of assistants under the COP - Career Opportunities Program - in the United States).

RECRUITMENT AND TRAINING OF ASSISTANTS

Perhaps because the case studies mainly concern countries (England and the United States) where the local education authorities enjoy great autonomy and schools themselves often have a certain freedom in the utilisation of their resources, it is difficult to detect the broad lines of policy adopted in recruiting assistants. The situation in Lower Saxony where school assistants are given civil service status may be considered exceptional. Even in a centralised country like Sweden, the assistants are paid - and therefore recruited - by the municipal authorities out of a "reinforcement resource" which they can use for various purposes, including payment of extra teaching hours.

But the advantage of this absence of fixed rules is that recruitment can be more effectively adapted to the special needs of schools and parents can participate where appropriate (e.g. Julian's Primary School in England, where the parents are invited to come and help in the classroom itself). The recruitment of assistants who live in the same place and belong to the same community as the pupils promotes a better understanding of the special problems of the children and better relations with the parents. This is all the more important when the children come from a poorer background. For example, the Career Opportunities Program (COP) created in 1969 for a period of five years under the auspices of the United States Office of Education, which made grants to local school systems using assistants in schools attended by children from low-income families, recruited its participants among people who, in addition to their desire to improve the children's education, lived in the same area and belonged to the same environment as the children.

No doubt because of the variety of functions assigned to the assistants, their qualifications and training vary greatly. In certain cases (for example, Julian's Primary School in England), the teachers consider that assistants do not require training, which in any event is no guarantee that they are suitable for the tasks to be performed or will adapt to the school itself. They feel that personal qualities and a liking for children are much more important. In Norway, no special qualification is required of assistants at compulsory education level, but they are expected to have a certain experience of clerical work.

In other cases, assistants are trained "on the job" or receive a short formal training (out of more than 100 local education authorities in England and Wales, only 10 organise courses, varying between one day and one month, for primary school assistants). However, more structured programmes do exist. For example, in Bavaria, official teaching assistants must take a full-time two-year course and have three years' practical training. In England and Wales, the certificate of the NNEB (National Nursery Examination Board) is the only official qualification for work as an assistant in a nursery school or an infant school (children between five and seven years of age). The course lasts for two years and combines formal instruction given in a College of Further Education or a special school (60 per cent of the time) with practical experience in a nursery school and an infant school (40 per cent of the time).

In the United States, assistants are generally required to have a high school diploma and experience of children's education acquired voluntarily or otherwise. Although a special training is also required, most assistants do not have it and learn the job with the help of teachers in the school. However, the United States Office of Education has published a suggested standard curriculum for assistants consisting of 13 courses which, combined with work in the classroom - either as assistants or during a practical course for full-time students - leads to an associates degree. These courses cover the school and the community, instructional media, communication skills (reading, writing, speaking), methods of selection, construction, presentation and evaluation of learning material, child development, language skills for children, community development, teaching/learning methods, mathematics skills for children, tests and measurements, relations between the "human" services, community history and libraries as learning tools. The most interesting experiment, however, appears to be the Career Opportunities Program already mentioned, which enables assistants to acquire practical experience and to shoulder more responsibility in the school while taking a formal course of education for a first university degree and the teaching certificate. This is one of the very few examples where assistants are not shut off in a subordinate professional category but have career opportunities leading right up to incorporation in the teaching body.

INFLUENCE OF ASSISTANTS ON THE LEARNING PROCESS

Apart from the important affective role which assistants can play among children, particularly the youngest or those with special problems and which itself has repercussions on the child's development and his successful integration in the school and therefore on his educational results, assistants may have a more direct influence on the learning process as soon as they have a teaching relationship with pupils in the classroom. In addition their presence permits pupils to experience many differing personalities and types which is, in itself, beneficial for their affective and cognitive development.

For instance, in a prestructured type of teaching such as the IMU programme in Sweden (mentioned in p.144 above) in which each pupil advances at his own pace, assistants may be given responsibility for one group of pupils while the teachers devote themselves to another, more especially the slow learners. But it is mainly in the United States that research has been done to assess the role of assistants in the cognitive development of children. For example, nine state nursery school classes were compared in Minneapolis, three without assistants, three with only one assistant and three with five assistants. The gains obtained between the pre-test and post-test reading session taken by all pupils were 50 per cent better in classes with only one assistant than in classes without an assistant. On the other hand, although performance was better in classes with five assistants than in those with none, it fell short of the result achieved when there was only one assistant.

Similarly, various studies have shown that pupils who are in need of compensatory reading lessons or are generally backward make faster progress and it is less necessary to put them into special classes if they can have the help of an assistant. The evaluation of two programmes carried out in Florida and in New-York concerning the utilisation of assistants to teach low-income parents how to contribute towards the education and teaching of their children showed that these children developed better in all fields and had a better performance than children from the same environment receiving compensatory lessons.

Finally, surveys on the behaviour of teachers who had followed the COP Program showed that they concentrated their teaching much more on the pupils, accepted individual differences more readily, felt more responsible for their pupils' progress and fostered a climate more favourable to the learning process in their classrooms than teachers who had not followed the Program. Furthermore, they were more prepared to remain in the same school than the latter and took a more active part in its development and improvement.

TEACHER-ASSISTANT RELATIONS

While teachers and their associations are very ready to agree to assistants being given administrative and supervisory tasks, they are much more reticent when it comes to using them in the classroom. The main reason is that they want to be sure that the teaching will be done by properly trained staff, but they sometimes also fear that this may lead to the creation of a corps of "sub-teachers" which will be harmful to the unity of the teaching body and may conceivably come into competition with the latter, especially during a period of budgetary restrictions.

The utilisation of assistants in the classroom depends a great deal on the teaching style adopted by the school and/or the teacher. If this style is traditional - the teacher working with the entire class - the assistant has hardly any role to play and is there mainly to relieve the teacher of routine and supervisory tasks. On the other hand, if active methods are employed - work in small groups on a theme or project, individualised teaching - the assistant may take a much more active part in teaching the pupils. In any event, the teacher remains responsible for the teaching and learning in the classroom and therefore supervises the activities of the assistants.

In any event, the utilisation of assistants changes the role of the teacher. In the first place, he is no longer the only adult in the classroom or the only judge of the teaching he gives. Secondly, he has to devote much more time to planning his work in order to be able to make best use of the assistants put at his disposal. The problem then arises - as revealed in the case studies - of the compatibility between teachers and assistants. It appears than an assistant chosen or accepted by the teacher is preferable by far to an assistant appointed or more or less imposed by authority. Similarly, teachers are more ready to accept assistants - particularly those who are

142

recruited voluntarily or who have little or no training and are therefore less likely to present any competition - than to accept other teachers. This problem can only be solved by a precise definition of each person's role, bearing in mind that the teacher is responsible for the teaching. It should be noted, however, that as a rule teachers are by no means trained to work in a team, any more than to supervise assistants and to help to train them on the job.

It is also possible that assistants working regularly with the same group of pupils (as in certain English nursery schools) consider that they know the pupils as well as - or better than - the teachers; this may be a cause of friction, particularly when an experienced assistant has to work with a young teacher.

Finally, the European teacher associations, which were already unenthusiastic about the utilisation of assistants - particularly when the latter have a teaching role to play - are still less enthusiastic at the present time. In view of budgetary restrictions and the teacher surplus which already exists or is impending in a large number of countries, these associations are demanding posts for all teachers and are very reluctant to accept the use of less qualified personnel or self-teaching equipment. On the other hand, in the United States, the two major teacher organisations (the National Education Association - NEA, and the American Federation of Teachers - AFT) have given their support for the utilisation of assistants and the AFT accepts them as full members.

CONCLUSIONS

The essential problem of the utilisation of assistants is the vagueness of the definition of the respective roles of teachers and assistants. In particular, it is difficult to know whether the purpose of having assistants in the classroom is to relieve the teacher of non-professional tasks or to contribute towards a change in the teaching style used.

The variety of tasks entrusted to assistants may suggest that training on the job is preferable to formal training or should go hand in hand with the latter. However, if assistants are to have responsibilities in the classroom, they must be given a special training and the better and more experienced assistants should have the opportunity of making a career and becoming teachers (COP in the United States). On the other hand, assistants who have had a special training (as in Bavaria, for example) may feel frustrated if they are mainly used for administrative or other tasks outside the classroom.

Despite the fact that assistants are at present mainly used in pilot schools, the case studies reveal that their role is positive, not only to teachers and administration, but also to the pupils. They therefore appear to have become - at least in the countries studied - one of the elements of school life which can no longer be eliminated. The next problem concerns the direction in which their role will evolve, particularly with regard to educational activities in and out of school, and whether they will finally form a category of personnel with their own status and adequate career opportunities.

ANNEX II

GUIDE-LINES FOR CASE-STUDIES

INTRODUCTION

(i) Characteristics of the school:

- Type(*) (primary, secondary, basic, comprehensive etc.)
- Situation (rural, town etc.)
- Number of pupils
- Preparation for an examination, or not? (which?)
- Whether pupils are prepared for an external examination or not - if so, what examination?

(ii) Characteristics of pupils

- Age limits
- Previous school experience (coming from traditional or innovating schools, and of what type?)
- Destination on leaving the school (traditional or innovating schools, active life, etc.)
- Method of recruitment (selective or not)
- Social origin (representative of all the social classes or biassed towards one - if so, which?)

(iii) Characteristics of innovation - based on technology

(closed-circuit television, computer-assisted instruction, multi-media usage); individually prescribed instruction; opening the school to the community (schools without walls, integration of the school in a socio-cultural unit); pupils' participation in preparing curricula; institution of self-management in classes, etc; also the dpecific objectives of the innovation.

THE WAY IN WHICH TEACHERS ACCOMPLISH THEIR TASKS

This part of the study should:

(i) analyse the pedagogical approaches used by the teachers; these may vary according to the educational objectives and sequences adopted to attain them. Page 155 gives an example of a taxonomy of possible pedagogic approaches and an explanation of the terms used.

(ii) analyse the changes in the teacher's role depending on the various teaching/learning processes he has to use. Here again the teacher generally does not adhere to one role, but changes from one to the other according to the outcomes desired. Likewise, each role may have different repercussions on the other components of the educational process involved.

(*) These case studies concern only the educational levels covered by compulsory schooling.

For instance, the "instructor's role" immediately calls to mind the traditional teacher, who speaks in front of a class of pupils passively listening, who mainly uses the blackboard and school textbooks and who corrects the homework which he himself has set. But this is also a role that of a teacher in an innovating school transmitting to a group of pupils or an individual pupil the knowledge required to begin or continue a given activity.

The difference is that in a traditional situation the teacher will almost exclusively play the role of instructor, whereas in an innovating situation he will play one of the various roles used by the teacher to attain a specific outcome (here the direct transmission of knowledge). In this last situation the teacher has to have much more flexibility since he must be capable of changing his role at any time, to adapt himself to the particular needs of one or more pupils.

Table B, page 158, gives a table showing the teachers' various possible roles and a list of other components of the teaching/learning process which may change according to the outcomes desired.

TEACHERS OTHER TASKS AND THEIR RELATION TO COMPONENTS OF THE TEACHING/LEARNING PROCESS

The interrelations between the various components of the teaching/learning process are shown in diagram form in Graph C. Each interrelation either helps to improve the process or to obstruct it. When taking them into consideration in the case studies, emphasis should be laid on the manner in which they encourage or hinder change.

General aims and objectives

These depend on a country's history, culture and its stage of political, social and economic development. Although there is usually general agreement on what the overall aims of education should be, their actual scope may be interpreted in many ways (for instance, does equal opportunity mean the same type of education for all or education adapted to each individual and offering him all his opportunities?) and the means used to attain them may vary. In practice, they are converted into:

Specific pedagogical objectives

These may be identical in all schools or alternatively differ between various teaching levels and establishments. The principal aim of the traditional type of teaching at all levels is to enable pupils to acquire knowledge and train them to reason abstractly. Their role will be primarily passive. Conversely, with the newer teaching patterns, an attempt is made to involve pupils in their own learning process, develop their personality as a whole and enable them to learn how to acquire knowledge. In many cases several objectives are pursued, but varying degrees of importance will be attached to each of them; this may also vary in different educational sequences. The objective(s) to be attained determine(s) the choice and use of the various human and material resources, the way in which teachers fulfil their tasks and the aptitudes required.

Actions of teachers

Teachers' actions during the teaching/learning process - perhaps the most important section of the report - have been dealt with in Part 3 and it is therefore unnecessary to refer to them again here. Teachers' actions, other than teaching in the strict sense, will be covered under the heading "Tasks of teachers".

Tasks of teachers

While most teachers still devote the bulk of their time to teaching in the strict sense, they now have to cope with an increasing number of other tasks the most important of which are set out below. It would be very useful if it were to prove possible in the case studies to quantify the relative time spent on the various tasks in the teachers' routine (for instance the daily, weekly or monthly percentages).

- Administrative and managerial tasks: The volume of this work may partly depend on the non-teaching administrative staff available and partly on the degree of staff participation in the running of the school.

- Curricula planning: The volume of this work may vary according to the school's degree of independence. As in the case of planning the work of pupils (groups or individuals), it may be done individually, with other teachers (teaching the same or different subjects) or in a larger team consisting of the school principal, assistant teachers, technicians and specialists.

- Preparation of pupils' work: This, too, may take more or less time and various forms according to the teaching methods adopted (formal classroom teaching, pupils working in teams of different sizes, individual work). (See page 159). last column.)

- Use of pedagogical material: This may call for the development of the material and its testing before use, as well as the overhaul and maintenance of the material after use, a task which may or may not become the responsibility of the teacher using it, who also sometimes has to create his own material.

- Supervision and evaluation of pupils' work: This may differ according to whether the students are working in large groups, in teams or individually, and also according to the type of work to be evaluated: classwork, homework, tests, examinations and projects etc. (See page 159 :Evaluation of pupils' work.)

- Evaluation of curricula: Students working in small groups, and particularly those working individually, need to have their curricula constantly reassessed so that they can be adapted to their needs as their studies progress.

- Personal contacts with pupils: Changes in the teacher's role and in the teacher/student relationship may make it necessary for the teacher to extend his contacts with the student beyond those essential for the transmission of knowledge. The teacher may be called on more and more frequently to act as 'tutor' to a group of students. This may consist of following their progress and their failures in all subjects, helping them to overcome their various academic and personal difficulties.

- Contacts with other adults: The teacher may now no longer be isolated in the classroom and may have an increasing number of contacts with other teachers; for instance, to share out tasks, define objectives, and evaluate the pedagogical activities. He also comes into touch with other categories of staff, the students' parents and other members of the community.

- Personal development: The rapid development of knowledge, teaching methods and aids used, as well as the variety of tasks to which the teacher must adapt, may make it essential for him to devote part of his time to personal retraining either within the school or outside. Similarly to enable the teacher to act as a stimulus to change, he may have the opportunity to engage in educational Research and Development activities.

- Community activities: With the opening of the school to the community the teacher may take an increasingly active part in the community's socio-cultural and other activities. Furthermore, his role may make the innovations widely known.

Other components in the teaching/learning process (see page 161 for further details) are:

- Human Resources: All persons concerned within the school or outside.

- Accommodation and time-tabling: Use of accommodation and time.

- Material resources: Written material, audio-visual aids, etc.

- Activities of pupils: Learning and other activities.

- Grouping of pupils: The grouping varies and is more or less flexible.

To conclude the case studies it would be helpful to express an opinion on the aptitudes which are seemingly most required by teachers for their new roles and tasks and what initial and continuous training could help them to acquire and develop these.

These aptitudes may be divided into 4 categories:

(i) As regards the pupils: Should teachers not accept the pupils as they are and not as they would like them to be? Should they not be capable of working with children and understanding them, know how to identify each pupil's and each group of pupils' needs and so adapt their teaching to each pupil individually? Should they not have the ability to create the most suitable climate for the pupil's motivation and training and evaluate not only the pupil's aptitudes but his whole personality in order to be able to guide him? Should they not agree to delegate part of their responsibilties to the pupils?

(ii) As regards other teachers: Since the teacher is working in less and less isolation should he not, for instance, know how to share responsibilities, give a team the benefit of his knowledge and special aptitudes, agree to make use of those of others and, in short, see that an atmosphere of co-operation and understanding prevails?

(iii) As regards other adults (whether other categories of school staff, parents of pupils or other members of the community): The pedagogical teams tend to become larger and include persons with different backgrounds having a different training from that of teachers. Likewise, the latter have to come into closer contact with the school heads and administrative staff. Lastly, the opening of the school to the community means that teachers have contacts not only with the pupils' parents but also with other members of the community. For the exchanges with these various categories of persons to be beneficial, should the teachers not have new aptitudes, particularly in the area of communication and collaboration.

(iv) As regards himself and his knowledge: To meet his new obligations and the rapid change in knowledge and techniques should the teacher not be capable of continuous self-criticism, of questioning his own knowledge, of relearning and widening the area of his understanding of subject fields which were not originally his, of acquiring a certain technical aptitude for making use of teaching auxiliaries and taking part in the school's management and administration?

A. A taxonomy of pedagogic approaches

Organising lines of communication and space	Access to "educational" knowledge	Organising knowledge
Teacher-oriented	Formal	Closed
Pupil-oriented	Informal	Open
Teacher-oriented	Formal	Closed
Pupil-oriented	Informal	Open

At first sight, the components given above may appear logically interlinked, i.e. pupil-oriented to informal to open; this is untrue, pupil-oriented to informal to closed is equally possible.

1. The organisation of the classroom and the type of communication expected in it

(a) Teacher-oriented

The focus is on the teacher; all the communication is either from him or to him. Although he may move about, he generally faces the pupils who sit in rows. His other means of communication - blackboard, audio visual screen - are behind him in front of the pupils, who never leave the classroom (except for very specific purposes).

(b) Pupil-oriented

The focus is on the students, normally working in groups. Communication is between the students and between the teacher and the group or the individual pupil, although communication between the teacher and the whole class may occur. The desks and tables are so arranged that the students can talk to each other. The teacher may have a station at one end of the room but generally does not stay there. Students may leave the classroom to use other sources of information.

N.B. The same teacher may change from one type of organisation to another as, for example, when a teacher, normally using an organisation focussed on him, runs project work for a month.

2. The way in which students gain access to the "knowledge" necessary for learning

(a) Formally

The "knowledge" is presented to the student who basically plays a passive role - at least he does not search for the knowledge. It can be presented:

(i) in the teacher's own words and his dictated notes supplemented by school textbooks;

(ii) by individualised self-instructional printed or audio-visual sequences;

(iii) by a combination of (i) and (ii).

(b) Informally

Here the information has to be sought for by the pupil who has an active role; the teacher will be one source of knowledge among many including books, information sheets, etc.

3. The way in which the knowledge is organised

(a) Closed

The knowledge to be acquired is clearly defined and is related to the general "organisation of knowledge" (i.e. the discipline) of the subject to be studied. The pieces of knowledge presented in the individual lesson fit with each other to form a coherent curriculum for a term of one or more years in that subject.

N.B. The objective of such a structure is primarily the acquisition of knowledge itself.

(b) Open

There is no strongly predetermined area of knowledge. obviously there are degrees of non-structuring:

(i) The general study area is defined, i.e. the First World War; but students may choose within this area;

(ii) The area is wide but is still based on only one discipline;
i.e. the students may choose any theme in 20th Century history.

(iii) The area is extremely wide and interdisciplinary i.e. students may choose a theme from any subject that has interested them in the last few weeks' news.

N.B. The objectives of an open organisation of knowledge are the acquiring learning techniques, organising of material, and the development of communication skills rather than the acquiring of knowledge itself.

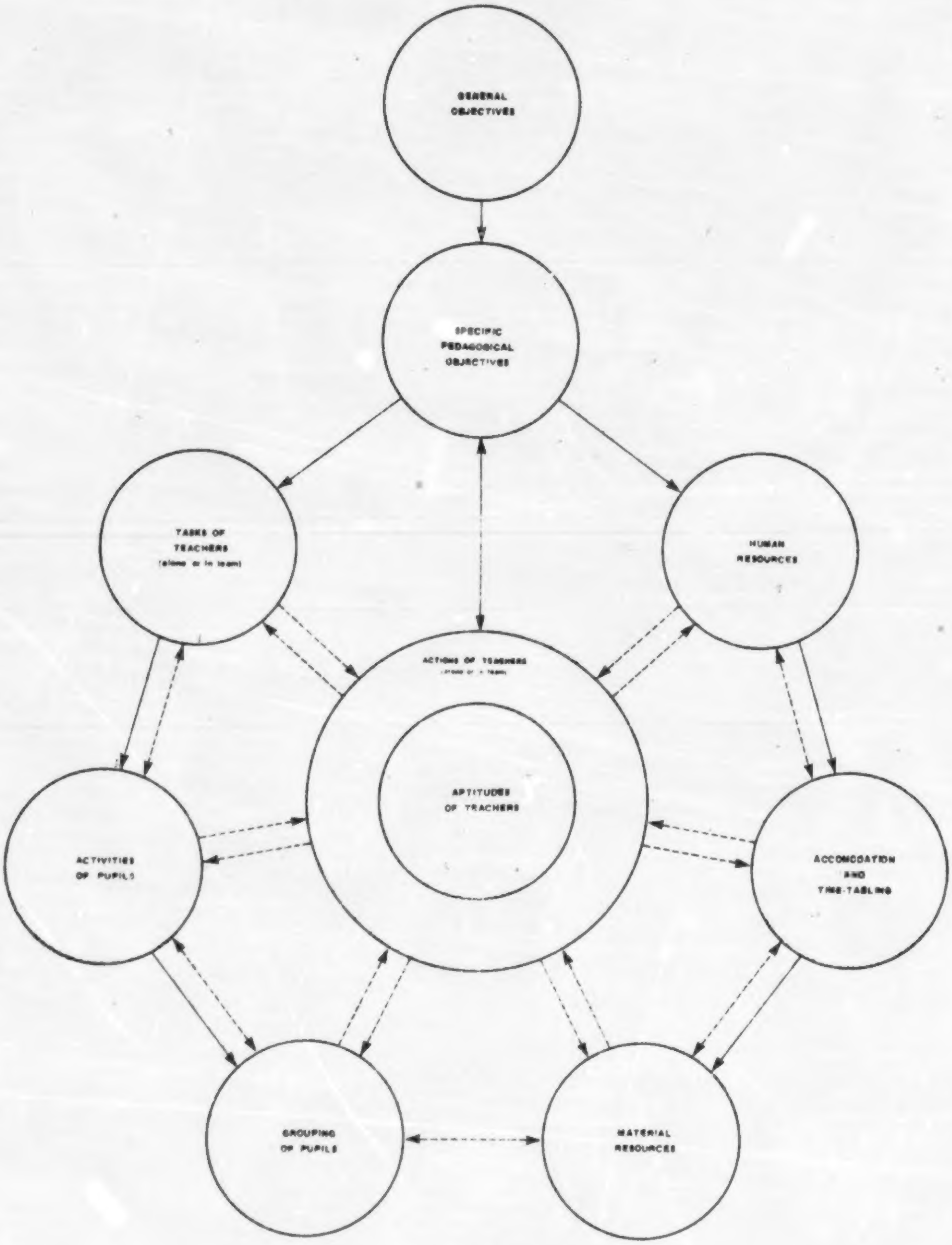
B. Analysis

Role	Teachers' actions	Grouping of pupils	Action of pupils
INSTRUCTOR (when the knowledge is "distributed" mainly by the teacher) SUPERVISOR (when the knowledge is not "distributed" mainly by the teacher ADVISOR/CONSULTANT (when the teacher helps the pupils with their activities LEADER/GUIDE (when the teacher stimulates the pupils.) PARTICIPANT/CHAIRMAN (when discussion is the main activity) ORGANISER (when the teacher "arranges" the pupils' timetable and activities)	Transmits knowledge Asks questions Dictates notes Sets exercices Sets and organises examinations and tests Guides Makes suggestions Proposes working methods Motivates Advises on choice Explains how to handle material and information sources Practises continuous assessment Makes an evaluation based on : - predetermined standards - the student's own level of work - the student's individual personality Listens Looks for something to awake the pupil's interest Keeps order Encourages a sympathetic atmosphere Punishes Organises and administrates material resources Organises the use of pupils' time Organises his own use of time	Class Large group Medium group (10-16) Small group (3-6) Pair One pupil The grouping of pupils may be decided by the teacher or left to the pupil's initiative It may be used generally or for a particular activity	Listens Replies to questions Takes notes Does exercices Takes tests and examinations Works on - an assigned task - a task chosen by himself Discusses the subjects to be studied Seeks information Undertakes and follows a project in a group or individually Reads books and documents Uses audio visual aids, films and artifacts Talks to teachers friends and various members of the community Writes accounts projects etc Makes tapes, takes photographs illustrates graphically

of the teacher's principle role

Resources		Evaluation of pupils' work	Provision of new resources	Preparation of work for pupils
Material	Human			
School textbooks Reference books Documents Work sheets Programmed instruction manual Blackboard Examples for demonstrations and exercises Audio visual aids Television Films Artifacts Environment	The teacher The other teachers Documentalist, Librarian Para-professional staff One of a pair working together The other pupils The community Own family	Class work Homework External tests Specially prepared tests Assigned tasks Contribution to discussion and to a joint project Progress of work on project Group discussion at end of project Subjective evaluation(of the pupil's whole personality) Self-evaluation No evaluation	Examples for demonstrations and exercises Reference material Student guides Audio visual aids "Loops" and additional stimulation material Environment and community resources	Ensuring own knowledge of the subject field Ensuring own knowledge of background to project work etc Collecting physical or printed material Arranging human contacts within or outside the school Preparing demonstrations and audio visual aids Thinking out tactics for helping the group and individuals in their activities Ensuring that the work-sheets are well organised Choosing or writing the exercises Planning homework Organising learning sequences Ensuring the progress of each pupil's knowledge Familiarising himself with pupil's progress Planning follow-up work

C. ANALYSIS OF TEACHERS ROLES AND TASKS
INTERRELATIONS BETWEEN THE VARIOUS ELEMENTS TO BE TAKEN INTO CONSIDERATION


GENERAL OBJECTIVES
SPECIFIC PEDAGOGICAL OBJECTIVES
TASKS OF TEACHERS (alone or in team)
HUMAN RESOURCES
ACTIONS OF TEACHERS (alone or in team)
APTITUDES OF TEACHERS
ACTIVITIES OF PUPILS
ACCOMODATION AND TIME-TABLING
GROUPING OF PUPILS
MATERIAL RESOURCES

155

D. Other components of the teaching/learning process

HUMAN RESOURCES

Although the teacher remains the principal agent for the transmission of knowledge, the school must increasingly call on more diversified personnel in order to run efficiently and fulfil its role with respect to children and young people by not only regarding them as pupils, but by also taking into consideration their total personalities. Except in very sparsely-populated regions, the tendency is to group pupils in schools which are large enough to enable them to benefit from an adequate variety of school accommodation and modern equipment. This in turn calls for the provision of administrative and clerical staff to run the school efficiently. Similarly, the use of technological aids and the development of practical activities may require specialised technicians. The transition from teaching based on the oral transmission of information from teachers to pupils to a form of learning based on discovery by the pupils makes it essential for pupils to have access to resource and other centres where they can call on documentalists or librarians capable of helping them in their research. Furthermore, the school is tending to play an increasingly important role in identifying any handicaps that pupils may experience and difficulties that they may meet in the learning process and in their physical development, whether attributable to the school, family or social background. Accordingly, in order to resolve these different problems, schools may have on their staff - or share with other schools - doctors, social workers, psychologists, study advisers and careers counsellors who collaborate more or less closely with the teaching staff. Another trend - although still not very common, it is true - is to call on persons outside the school (professional people or simply parents of pupils) for specific tasks.

Since teachers' tasks are expanding and becoming more diverse, some may be handed over to less-qualified personnel (assistants, aids, auxiliaries) who may or may not be under the direct responsibility of the teacher and may or may not be paid. It should be pointed out, however, that the use of this category of staff gives rise to a number of problems - as regards their specific status and training - which do not seem to have been resolved in most countries. The case studies should, if possible, describe in some detail the tasks given to this category of personnel and the qualifications they are required to have.

Lastly, not only may pupils at the same level help each other but even those at higher levels may appreciably contribute to the education of their younger comrades.

Staff in the different categories can either work individually in their own fields or in small or large teams: a team composed of teachers in the same field, one composed of several teachers from several fields, a pedagogical or psycho-pedagogical team composed of teachers, medical and social personnel, advisers and career counsellors, technicians and documentalists.

ACCOMMODATION AND TIMETABLING

Changes are also taking place in school design; the school divided into a given number of classrooms of the same size for a predetermined and fixed number of pupils is being replaced more and more by the school in which accommodation is used more flexibly to meet the particular requirements of various learning processes: the large hall for a gathering of many pupils, partitioned rooms or rooms with moveable partitions for individual and/or team work, science and language laboratories, special rooms for music, drawing, manual work, gymnastics, etc., and, not to be overlooked, the resource centre which may become the very heart of the school and the corridors and playgrounds which are frequently a favourite place for personal contacts. Moreover, there is increasing awareness that schooling is only one aspect of education and that pupils can learn, with or without the help of teachers, outside the school itself: museums, socio-cultural centres, enterprises, etc.

Another problem of internal organisation concerns the correlation between the use of pupils' and teachers' time and, in some cases, that of other categories of staff. In many countries teachers are restricted to a given number of teaching hours, which may vary according to the school level and their qualifications, but is only rarely based on the number of hours pupils are in school. In these circumstances, it is often very difficult for teachers to engage in activities other than teaching in the strict sense, and, particularly, to establish those personal contacts with pupils and other teachers which are increasingly acknowledged to be valuable. In the case studies it would be helpful to show how this question is solved in practice and how much freedom left to teachers and to pupils to organise their timetable and curriculum.

MATERIAL RESOURCES

These may also vary and be more or less sophisticated. While in the traditional school the main classroom aids are the text book and blackboard, in newer situations the teacher may use varied material resources such as work sheets, newspapers, magazines, reference books, science and language laboratory material, museums and other out-of-school centres, radio and T.V. programmes (produced nationally or locally or by the school itself), video tapes, cassettes, tape recorders, video tape recorders, films, slides, programmed instruction manuals, computers and photocopiers, not forgetting the usual material and equipment of various kinds. It should be mentioned however, that it is not sufficient only to give a school modern equipment it must also be given the financial resources needed to make it work, to buy the necessary ancillary material and the non-teaching assistants to organise and maintain it. School transport and canteens may also be included under this heading.

ACTIVITIES OF PUPILS

The pupils are the principal component of the system and all the other components must contribute to their education. Their life within the school may be focussed solely on fundamentally academic learning in the strict sense or make more or less room for other learning activities: sports, recreation and personal contacts with other pupils, as well as with teachers, study advisors, psychologists, career counsellors and other categories of staff. In the last analysis, the school is a point of contact with the community. The pupils may be allowed to some extent to organise their activities as they wish both within it and outside (museums, libraries, socio-cultural centres and enterprises) with the assistance and encouragement of staff.

GROUPING OF PUPILS

Likewise, pupils may be grouped in very different ways. The traditional class composed of a given number of pupils, usually at the same level, who together study a pre-established curriculum at the same pace, is tending to be replaced by more flexible groupings which vary according to the methods and aids used. For example, one may find:

- large groups of pupils attending film projections, lectures, etc.;
- groups of the same size as traditional classes or even smaller (10-15), for the in-depth study of a given subject with a teacher, for general instructions, general evaluation, etc.;
- medium-sized groups (8 - 15 pupils) for discussions;
- small groups (2 - 5 pupils) working in co-operation particularly on projects.

These groups may be chosen by the teacher or left to the pupils' initiative.

OECD SALES AGENTS
DÉPOSITAIRES DES PUBLICATIONS DE L'OCDE

ARGENTINA – ARGENTINE
Carlos Hirsch S.R.L., Florida 165,
BUENOS AIRES, Tel. 33-1787-2391 Y 30-7122

AUSTRALIA – AUSTRALIE
Australia & New Zealand Book Company Pty Ltd.,
23 Cross Street, (P.O.B. 459)
BROOKVALE NSW 2100   Tel. 938-2244

AUSTRIA – AUTRICHE
Gerold and Co., Graben 31, WIEN 1. Tel. 52.22.35

BELGIUM – BELGIQUE
LCLS
44 rue Otlet, B1070 BRUXELLES . Tel. 02 521 28 13

BRAZIL – BRÉSIL
Mestre Jou S.A., Rua Guaipa 518,
Caixa Postal 24090, 05089 SAO PAULO 10. Tel. 261-1920
Rua Senador Dantas 19 s/205-6, RIO DE JANEIRO GB.
Tel. 232-07. 32

CANADA
Renouf Publishing Company Limited,
2182 St. Catherine Street West,
MONTREAL, Quebec H3H 1M7 Tel. (514) 937-3519

DENMARK – DANEMARK
Munksgaards Boghandel,
Nørregade 6, 1165 KØBENHAVN K. Tel. (01) 12 85 70

FINLAND – FINLANDE
Akateeminen Kirjakauppa
Keskuskatu 1, 00100 HELSINKI 10. Tel. 625.901

FRANCE
Bureau des Publications de l'OCDE,
2 rue André-Pascal, 75775 PARIS CEDEX 16. Tel. (1) 524.81.67
Principal correspondant :
13602 AIX EN PROVENCE : Librairie de l'Université.
Tel. 26.18.08

GERMANY – ALLEMAGNE
Alexander Horn,
D - 6200 WIESBADEN, Spiegelgasse 9
Tel. (6121) 37-42-12

GREECE – GRÈCE
Librairie Kauffmann, 28 rue du Stade,
ATHÈNES 132. Tel. 322.21.60

HONG-KONG
Government Information Services,
Sales and Publications Office, Beaconsfield House, 1st floor,
Queen's Road, Central.   Tel. H-233191

ICELAND – ISLANDE
Snaebjörn Jonsson and Co., h.f.,
Hafnarstraeti 4 and 9, P.O.B. 1131, REYKJAVIK.
Tel. 13133/14281/11936

INDIA – INDE
Oxford Book and Stationery Co.:
NEW DELHI, Scindia House. Tel. 45896
CALCUTTA, 17 Park Street. Tel. 240832

ITALY – ITALIE
Libreria Commissionaria Sansoni:
Via Lamarmora 45, 50121 FIRENZE. Tel. 579751
Via Bartolini 29, 20155 MILANO. Tel. 365083
Sub-depositari:
Editrice e Libreria Herder,
Piazza Montecitorio 120, 00 186 ROMA. Tel. 674628
Libreria Hoepli, Via Hoepli 5, 20121 MILANO. Tel. 865446
Libreria Lattes, Via Garibaldi 3, 10122 TORINO. Tel. 519274
La diffusione delle edizioni OCSE è inoltre assicurata dalle migliori librerie nelle città più importanti.

JAPAN – JAPON
OECD Publications and Information Center
Akasaka Park Building, 2-3-4 Akasaka, Minato-ku,
TOKYO 107. Tel. 586-2016

KOREA - CORÉE
Pan Korea Book Corporation,
P.O.Box n° 101 Kwangwhamun, SÉOUL. Tel. 72-7369

LEBANON – LIBAN
Documenta Scientifica/Redico,
Edison Building, Bliss Street, P.O.Box 5641, BEIRUT.
Tel. 35[illegible]29–344425

MEXICO & CENTRAL AMERICA
Centro de Publicaciones de Organismos Internacionales S.A.,
Alfonso Herrera N° 72, 1er Piso,
Apdo. Postal 42-051, MEXICO 4 D.F.

THE NETHERLANDS – PAYS-BAS
Staatsuitgeverij
Chr. Plantijnstraat
'S-GRAVENHAGE. Tel. 070-814511
Voor bestellingen: Tel. 070-624551

NEW ZEALAND – NOUVELLE-ZÉLANDE
The Publications Manager,
Government Printing Office,
WELLINGTON: Mulgrave Street (Private Bag),
World Trade Centre, Cubacade, Cuba Street,
Rutherford House, Lambton Quay, Tel. 737-320
AUCKLAND: Rutland Street (P.O.Box 5344), Tel. 32.919
CHRISTCHURCH: 130 Oxford Tce (Private Bag), Tel. 50.331
HAMILTON: Barton Street (P.O.Box 857), Tel. 80.103
DUNEDIN: T & G Building, Princes Street (P.O.Box 1104),
Tel. 78.294

NORWAY – NORVÈGE
J.G. TANUM A/S,
P.O. Box 1177 Sentrum, OSLO 1

PAKISTAN
Mirza Book Agency, 65 Shahrah Quaid-E-Azam, LAHORE 3.
Tel. 66839

PORTUGAL
Livraria Portugal, Rua do Carmo 70-74,
1117 LISBOA CODEX.
Tel. 360582/3

SPAIN – ESPAGNE
Mundi-Prensa Libros, S.A.
Castelló 37, Apartado 1223, MADRID-1. Tel. 275.46.55
Libreria Bastinos, Pelayo, 52, BARCELONA 1. Tel. 222.06.00

SWEDEN – SUÈDE
AB CE Fritzes Kungl Hovbokhandel,
Box 16 356, S 103 27 STH, Regeringsgatan 12,
DS STOCKHOLM. Tel. 08/23 89 00

SWITZERLAND – SUISSE
Librairie Payot, 6 rue Grenus, 1211 GENÈVE 11. Tel. 022-31.89.50

TAIWAN – FORMOSE
National Book Company,
84-5 Sing Sung Rd., Sec. 3, TAIPEI 107. Tel. 321.0698

UNITED KINGDOM – ROYAUME-UNI
H.M. Stationery Office, P.O.B. 569,
LONDON SE1 9 NH. Tel. 01-928-6977, Ext. 410 or
49 High Holborn, LONDON WC1V 6 HB (personal callers)
Branches at: EDINBURGH, BIRMINGHAM, BRISTOL,
MANCHESTER, CARDIFF, BELFAST.

UNITED STATES OF AMERICA
OECD Publications and Information Center, Suite 1207,
1750 Pennsylvania Ave., N.W. WASHINGTON, D.C. 20006.
Tel. (202)724 1857

VENEZUELA
Libreria del Este, Avda. F. Miranda 52, Edificio Galipan,
CARACAS 106. Tel. 32 23 01/33 26 04[illegible]3 24 73

YUGOSLAVIA – YOUGOSLAVIE
Jugoslovenska Knjiga, Terazije 27, P.O.B. 36, BEOGRAD.
Tel. 621-992

Les commandes provenant de pays où l'OCDE n'a pas encore désigné de dépositaire peuvent être adressées à :
OCDE, Bureau des Publications, 2 rue André-Pascal, 75775 PARIS CEDEX 16.
Orders and inquiries from countries where sales agents have not yet been appointed may be sent to:
OECD, Publications Office, 2 rue André-Pascal, 75775 PARIS CEDEX 16.

OECD PUBLICATIONS, 2 rue André-Pascal, 75775 Paris Cedex 16 - N° 41.183 1979
PRINTED IN FRANCE
(91 79 04 1) ISBN 92-64-11938-8